THE ROYAL NETHERLANDS NAVY OF WORLD WAR II

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ILLUSTRATED BY PAUL WRIGHT

NEW VANGUARD 285

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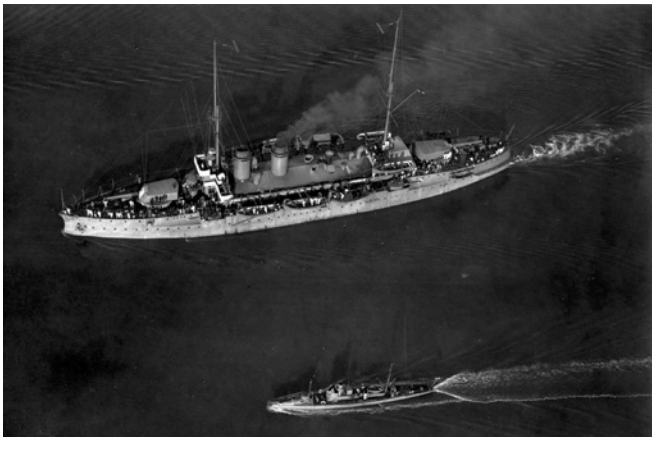
THE ROYAL NETHERLANDS NAVY OF WORLD WAR II

INTRODUCTION

Although considered a major naval power in the 17th and 18th centuries, the naval strength of the Netherlands was dismantled during the Napoleonic Wars with little interest among the Dutch leadership and population to heavily invest in its reconstruction in the decades that followed. Peace across Europe for much of the 19th century meant there was little need for an expensive fleet to protect home waters, while good relations with Great Britain ensured the protection of the Netherlands' most valuable overseas asset, the archipelago of the Dutch East Indies. As heavy industrialization did not fully take place in the Netherlands until the 1880s and 1890s – relatively late compared to Great Britain, France and the German states – the economic benefits from the natural resources of the East Indies were not fully exploited until the early years of the 20th century. Beginning in the first two decades of the 20th century, development of the oil and rubber industries in the archipelago, combined with massive foreign private investment, resulted in profits from the East Indies accounting for a substantial proportion of the Dutch economy – estimated by some scholars to be as much as 40 to 50 per cent by the 1920s. Between 1890 and 1930, the Gross Domestic Product (GDP) per capita in the Netherlands increased by 76 per cent and, by 1930, the Netherlands possessed the highest GDP per capita in Europe (second only to the United States worldwide). Both Dutch leaders and the Dutch populace were traditionally loath to sacrifice trade revenues for defence expenditures. As the Indies became such an integral part of the Dutch economy, however, greater attention eventually had to be given to its security.



The Pantserschip *Zeven Provinciën*, commissioned in 1910 and armed with two 28cm guns. The Pantserschip was a uniquely Dutch vessel intended to serve in a deterrence role for both coastal defence and colonial patrol duties yet built at a fraction of the cost of a battleship. It was an outmoded concept at the dawn of the Dreadnought Age, however. (Author's collection)

In the 1890s, Dutch leaders assumed that a small force of armoured ships, or *Pantserschepen*, and protected cruisers was sufficient for the defence of the East Indies – a small 'fleet-in-being' funded from a tight budget. The *Pantserschip* was a unique Dutch hybrid vessel, with a minimal primary armament of two heavy guns (28cm), intended to serve interchangeably as a coastal defence

battleship or an armoured cruiser depending upon whether it was serving in home or colonial waters. This small fleet-in-being, considered powerful enough to deter an enemy force of armoured and protected cruisers, appeared to satisfy the defensive needs of both the European Dutch coast and the waters of the East Indies, while doing so at minimum cost. It was assumed that a more significant threat to Dutch home or colonial territory would be deterred by the British Royal Navy – Dutch hegemony in the East Indies kept France, Germany and Russia (at this point colonial rivals of the British) from expanding their influence in the region. Events at the beginning of the 20th century brought this cost-effective Dutch approach to imperial defence to an abrupt end, however. First, the events of the Second Anglo–Boer War in South Africa, particularly the imprisonment of Dutch Boer women and children in concentration camps, caused a major rift in Anglo-Dutch relations to the extent that the *Koninklijke Marine*, or Royal Netherlands Navy, could no longer assume that the British Royal Navy was a friendly force. Second, rapid Japanese naval expansion in the wake of the First Sino-Japanese War saw the rise of a new rival naval power in East Asia. The Anglo–Japanese Alliance of 1902 and the destruction of a significant portion of the Imperial Russian Navy in the Russo–Japanese War in 1905 further strengthened Japan's naval position in Asia. The remaining European naval powers in the region, France and Germany, did not have the naval assets to counter Japan's growing fleet, and this change in the balance of power in East Asia left the Koninklijke Marine alone to defend the East Indies against any potential Japanese aggression – a task which, by the end of the first decade of the twentieth century, it was not equipped to perform.

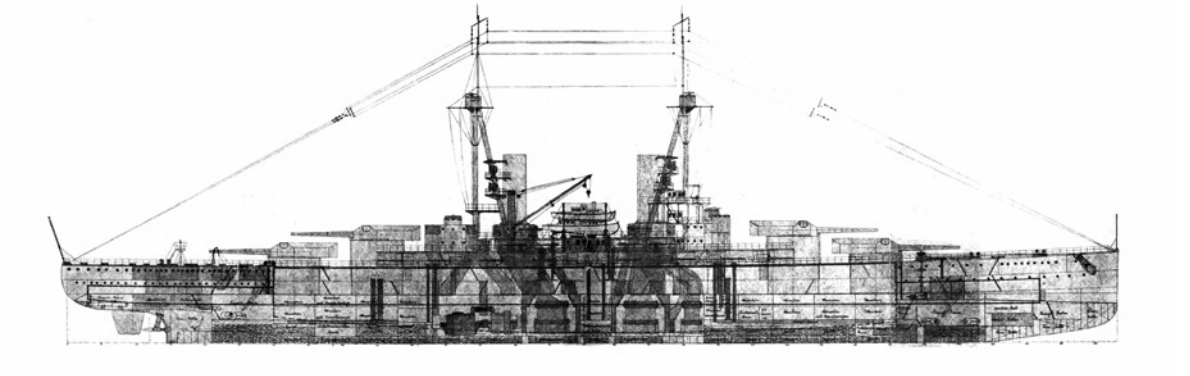
Admiral Jean Jacques Rambonnet (right) at Amsterdam Centraal Station in 1914. Rambonnet served as *minister van marine* from 1913 to 1918 and pushed for the construction of dreadnoughts for the Koninklijke Marine prior to World War I. (Public domain)

Due to the sudden naval rise of Japan, the Koninklijke Marine made the strategic decision to devote the majority of its present and future strength to the East Indies, calculating that the Dutch government's pursuit of a policy of neutrality among the Great European Powers would protect Dutch home waters and Dutch Caribbean possessions. A state commission was formed, beginning in 1906, to debate and determine what naval defence strategy and subsequent construction was needed for the East Indies in the wake of the Russo–Japanese War. Initially advocates of the *Jeune École* (the strategy of combating large battle fleets with forces of smaller torpedo-armed vessels) prevailed, resulting in the construction of the eight Fret class destroyers in 1910–13 and the development of new designs for small torpedo cruisers and *Pantserschepen*. The commissioning of HMS *Dreadnought* in 1906 and the subsequent worldwide flurry of dreadnought battleship construction tilted the debate back toward the strategy of a fleet-in-being for the Indies, however. By 1912, it was clear that the 7,500-ton *Pantsership* designs being proposed for the Koninklijke Marine were a worthless proposition against the 27,000-ton Kongo class battle cruisers and 30,000-ton Fuso class dreadnoughts being built in Japanese yards. That year naval minister Hendrikus Colijn, one of the leading advocates of fleet expansion in the Netherlands, assembled a team of naval experts which concluded that dreadnought battleships were essential to the defence of the East Indies and requested design proposals from the German Friedrich Krupp Germaniawerft firm. In August 1913,

Dutch cartoon postcard from World War I, with a Dutch sailor being tempted into an 'alliance' with the belligerent powers. While a majority of the Dutch military and political leadership was sympathetic towards the Central Powers, hostilities with the Allied powers would almost have certainly led to the loss of the East Indies; hence strict neutrality during the war was the official policy of the Dutch government. (Author's collection)

Viceadmiraal Jean Jacques Rambonnet succeeded Colijn as naval minister and, over the next several months, put together a construction plan which included five 24,605-ton super-dreadnought battleships, five 4,000-ton cruisers, and seven submarines, to be completed by 1919. When combined with the Fret-class destroyers already built, this new fleet-in-being would serve as the main instrument of a larger naval and foreign policy strategy for the East Indies. Rambonnet and his political allies favoured an adaptation of German Admiral Alfred von Tirpitz's *Risikogedanke*, or risk theory, maintaining a large enough fleet in the archipelago that, when combined with the forces of another friendly naval power, the combined naval forces would outnumber and effectively check any Japanese naval incursion into the region. To this end Dutch diplomats would push for close relations with the United States, which had abruptly found itself with interests in Southeast Asia following its acquisition of the Philippines in the Spanish–American War of 1898. The United States Navy likewise viewed the Imperial Japanese Navy as its primary rival in the region and Dutch statesmen actively sought to promote the growing American–Japanese naval rivalry.

In the summer of 1914, Rambonnet was prepared to bring his proposed fleet plan before the *Tweede Kamer*, the lower house of the Dutch *Staten-Generaal*, or parliament, and believed he had garnered enough political support to see it passed. In addition to Germaniawerft, six other foreign builders submitted designs for a super-dreadnought and, in June 1914, proposals from the design offices of the German Germaniawerft and Blohm & Voss, as well as the British Vickers Ltd. firm, were being seriously considered. Before the fleet plan could be voted on, however, World War I began and the immediate wartime commitments of foreign yards for their own navies superseded any construction for neutral powers. With dreadnought construction temporarily off the table, Rambonnet continued to promote his fleet plan, pushing for the construction of vessels that could be built in Dutch shipyards, namely cruisers. During the first months of the war the commerce raiding successes of the German light cruisers *Emden* and *Karlsruhe* had greatly impressed Rambonnet; Dutch naval officers reported their operations first hand as both vessels operated for a time in Dutch waters in the Caribbean and Southeast Asia. The German Kaiserliche Marine had developed a pre-war plan for *Kreuzerkrieg* (cruiser war or commerce raiding) in conjunction with its overall strategy of Risikogedanke, designing its cruisers for both scouting and overseas duties. Rambonnet was not interested in developing a commerce raiding strategy for the Koninklijke Marine, however, but he was impressed with the ability of these cruisers to operate individually at great distances and to outgun more weakly-armed opponents yet outrun those that were more powerful; nevertheless he intended to deploy such cruisers strictly in a reconnaissance role, but also using them to lure an attacking enemy force into the waiting arms of a Dutch battlefleet. Without access to foreign battleship construction this appeared to be a doomed strategy, but Rambonnet cleverly proposed an alternative 'battlefleet'. Rambonnet argued



Krupp Germaniawerft Project 806, a design for a 24,605-ton super-dreadnought battleship armed with eight 35.6cm guns. (Author's collection)

that a large force of submarines, which Dutch shipyards were capable of building, could equally defend against an enemy invasion force; Rambonnet was eager that naval construction of some sort should proceed, wanting to take full advantage of the contemporary heightened interest in naval expansion. Given the low speed and limited operational and patrol radius of submarines of the time, light cruisers were needed to scout for them and could also lure enemy vessels into an ambush of a concentrated submarine force – a strategy not unlike the one routinely pursued by the German High Seas Fleet in the North Sea during the war. Rambonnet still hoped to acquire modern dreadnoughts or battle cruisers once foreign shipyards could again be engaged, to serve as a line of defence supplementing a large force of submarines, but his sudden appeal for submarine construction garnered the support of both advocates of the fleet-in-being and *Jeune École*.

The strategic outlook of the Koninklijke Marine adopted just before the beginning of World War I was comparable to that of the German Kaiserliche Marine and its approach towards the British Royal Navy. In the Imperial Japanese Navy, the Koninklijke Marine faced a potential rival that would always be significantly larger in size and with which it would be unable to achieve parity in numbers. Thus, a strategy of deterrence via a fleet-in-being or a strategy of Risikogedanke was pursued. When a fleet plan centred around dreadnoughts could not be executed, the new technology of the submarine was embraced as a means of negating the superiority of the Japanese surface fleet, and a new force optimized for submarine operations was envisioned. This strategy largely dictated the types of vessels designed and constructed for the Koninklijke Marine during the interwar years.

Despite the emphasis upon the submarine, an undercurrent still persisted within the leadership of the Koninklijke Marine seeking the development of capital ships, which was largely responsible for the continued construction of cruisers during a period fraught with economic difficulties and depressions. The new risk theory based around commerce-raiding battleships adopted by the German Kriegsmarine in the mid-to-late 1930s renewed the discussion of a battle fleet just before the beginning of World War II, resulting in a dramatic shift in strategy. With its close ties to and adaptations of German naval strategy and technology, the Koninklijke Marine was certainly a unique entity within the Allied camp during the war. Its warships and their operations were a reflection of that unique status, one in which a smaller nation hoped to maintain, through risk theory, both its neutrality and its worldwide empire at minimal expense.

MAJOR SURFACE VESSELS OF THE KONINKLIJKE MARINE

Java Class Scout/Light Cruisers

In early 1915, the Tweede Kamer approved funding for two of the planned five light cruisers from Rambonnet's 1914 fleet plan. Recent Dutch naval design and construction had typically been in response to vessels built abroad but, with these new cruisers, Rambonnet wanted to set a standard higher than those presently building in foreign navies, particularly those in the Imperial Japanese Navy. Rambonnet used the recent 5,000-ton Chikuma class scout cruisers, armed with eight 15cm guns and a maximum speed of 26 knots, as the standard which the new Dutch cruisers had to surpass and requested a preliminary design from the Koninklijke Marine's design department. A rough design was completed, for reference purposes, by the navy's shipbuilding department in May 1915 for a vessel with the minimum requirements demanded by the Koninklijke Marine's leadership, including a maximum speed of 30 knots and a main armament of ten 15cm guns. Dutch designers had no prior experience with such a vessel, however, and the requirements were submitted to several German and British firms for a final design. Germaniawerft responded with a design a month later that, with some alterations, was readily approved. On 15 November 1915, the first light cruiser, *Java*, was ordered from the N.V. Koninklijke Maatschappij De Schelde firm in Vlissingen and her sister, *Sumatra*, was ordered one week later from the Nederlandsche Scheepsbouw-Maatschappij N.V. in Amsterdam. The keels of *Java* and *Sumatra* were laid down on 31 May 1916 and 15 June 1916 respectively. Funding for a third cruiser, *Celebes*, was approved in 1917 and an order was placed with N.V. Maatschappij voor Scheeps-en Werktuigbouw Fijenoord in Rotterdam on 14 November 1917. It appeared as if Colijn's and Rambonnet's efforts towards fleet expansion were finally bearing fruit.

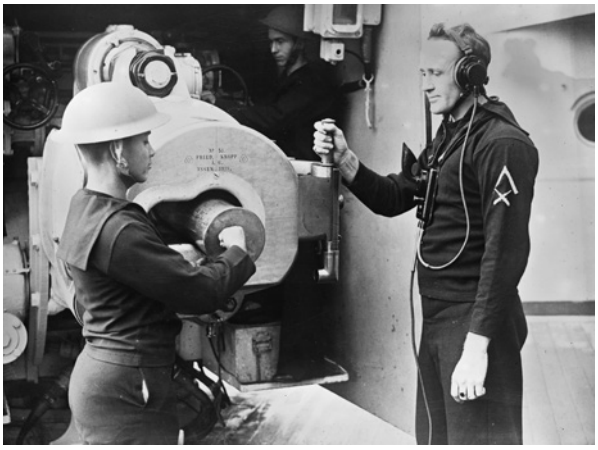
Java under construction at the N.V. Koninklijke Maatschappij De Schelde yard in Vlissingen. (Author's collection)

The Koninklijke Marine had contracted with Germaniawerft and other German manufacturers not only for technical assistance in building the cruisers but also for specialized equipment such as guns, turbines and fire-control systems. Steel was also to be purchased from Krupp but, by 1917, German manufacturers could not even keep up with orders placed by their own armed forces, let alone foreign orders. The flow of steel and other supplies from German firms slowed and then abruptly stopped in November 1918, as Germany itself collapsed into a period of revolution and civil war at home. Following the Armistice, some Dutch politicians questioned the need for expensive new warships, among them the new naval minister, Hendrik Bijleveld, who cancelled *Celebes* and halted worked on

Java and *Sumatra*. It was even suggested that the cruisers be sold to private concerns and converted into English Channel ferries. The leadership of the Koninklijke Marine opposed this move, arguing that the cruisers were still needed to serve as scouts for the submarine force designated for the East Indies, then also under construction. In 1920, the government allowed construction on *Java* and *Sumatra* to resume. This was in large part due to the fact that the costs of cancelling the contracts added to the amounts already spent on the vessels practically equalled the total cost of completing the two cruisers. *Sumatra* was finally launched before a large crowd, having been christened by Queen Wilhelmina, on 29 December 1920; *Java* followed on 9 August 1921.

Java shortly after being commissioned. The German influence upon *Java*'s and *Sumatra*'s design was aesthetically very evident, with their straight stems and tall pole masts. Furthermore, the horizontal ribs which covered the air inlets to the boilers, located at the base of the two funnels, were similar to those used on German battle cruisers. (Author's collection)

The ships were far from completed, however. German industrial and naval firms had not yet recovered from the collapse of the Kaiserliche Marine and post-war disarmament imposed upon them by the Allied powers. The equipment needed to outfit the cruisers thus had to be sought elsewhere. In November 1919, The Koninklijke Marine contracted the Coventry Iron Ordnance Works in Great Britain for the remaining steel for the cruisers. *Java* and *Sumatra* were protected by a 75mm armoured belt, which ran for 120m of the ships' 155.3m length. The vessels had an armoured deck 25mm thick at the horizontal centre but which thickened, at an angle of 42 degrees, to 50mm, where it met the armoured belt at the ship's side. The armoured belt combined with the sloping sides of the armoured deck gave the cruisers effectively 100mm of side protection. At the time, this was considered particularly strong for cruisers. It was originally intended for each cruiser to carry an armament of ten 15cm Krupp No. 6 (the export version of the SK L/50) guns, individually mounted in open-backed shields. Eight 15cm guns, found in a Krupp warehouse, were purchased in 1920, while the remaining twelve 15cm guns were ordered in 1922 from the Swedish firm of Bofors, which had purchased licenses from Krupp. De Schelde had acquired license production rights from Parsons Marine Steam Turbine Company for naval turbines already in 1902 and, in conjunction with Werkspoor, began producing turbines for the Koninklijke Marine, starting with the Fret class destroyers in 1910. The larger turbines for the cruisers took the company a longer time to construct and, on 31 May 1922, a devastating fire swept through the Werkspoor facilities, destroying the direct-drive turbines destined for *Sumatra* and causing further delay. After the fire, the Swiss Escher Wyss & Cie. firm in Zürich was contracted to provide Zoëlly geared turbines for *Sumatra*. The Koninklijke Marine wanted to acquire German fire control equipment, which had proven its worth during World War I, but German manufacturers were barred from producing such materials following the Treaty of Versailles. To circumvent this, the Koninklijke Marine contracted



Sailors loading a 15cm Krupp Export Model No. 6 (SK L/50) gun in an open-backed shield turret aboard *Sumatra*. (Nationaal Archief 935-0269)

with a new Dutch concern in 1922, Hazemeyer Signaalapparatenfabriek, founded by Siemens & Halske AG in The Hague that same year. *Java* was finally commissioned on 1 May 1925 and *Sumatra* followed on 26 May 1926.

A decade had passed since *Java* and *Sumatra* were first ordered, but their laboured progress proved of some benefit to the Koninklijke Marine. The need to acquire modern naval equipment from domestic manufacturers compelled the Dutch authorities to allow German naval firms to secretly set up research offices in the Netherlands. In addition to the Siemens-backed Hazemeyer Signaalapparatenfabriek there was the optics firm of Nedinsco (a front for Carl Zeiss AG) and the searchlight manufacturer N.V. Nederlandse Apparatenfabriek Lonneker, or Nedalo (another Siemens front). The most important German naval enterprise established in the Netherlands was the design firm of N.V. Ingenieurskantoor

A

JAVA CLASS CRUISER *JAVA* (1938)

When designed in 1915, the Koninklijke Marine calculated that its Java class scout cruisers were the most powerful and most modern cruisers yet acquired by any navy. With ten 15cm guns, two along the centreline fore, two aft, and three on each side, the Java class vessels had a heavier armament than any other cruiser in the world. Completion of the Java class cruisers was significantly delayed, however. The Koninklijke Marine relied for the vessels' specialized equipment on German naval manufacturers whose ability to deliver was crippled by the dismemberment of the German arms industry after World War I. Meanwhile the world's major navies were developing new classes of cruisers under the stipulations of the Washington Naval Treaty of 1922. These new 'heavy' cruiser designs eclipsed the Java class and were armed with 8in (203mm) guns mounted in enclosed turrets with heavier armour protection. By the time *Java* and *Sumatra* were completed in 1926, the Imperial Japanese Navy had already laid down the eight heavy cruisers of the Furutaka, Aoba and Myoko classes. Redesignated as light cruisers, *Java* and *Sumatra* were only minimally modernized prior to World War II. Both vessels had their original 75mm anti-aircraft guns replaced with single Vickers 40mm QF 'pom-pom' guns. In 1937, *Java's* pom-pom guns were removed and replaced by eight Bofors 40mm canons, dual-mounted in four stabilized automatic turrets which were all controlled by a single Hazemeyer automatic aiming device. *Sumatra* retained her Vickers anti-aircraft guns. The cruisers' 15cm guns never received enclosed turrets during their modernizations nor did they receive deck-mounted torpedo tubes, which had become standard armament upon light cruisers during the interwar years. By World War II, they were roughly the equals of modernized British Danae class light cruisers and American Omaha class light cruisers. *Java* is shown here as she appeared following her modernization in 1937–38.

Java class specifications (1926)

Dimensions: length: 155.3m; beam: 16m; draft: 5.5m. **Full Displacement**: 8,278 tons. **Ship's Complement**: 526 men. **Armament**: ten 15cm Krupp Export Model No. 6 (SK L/50) guns in ten individual shielded mounts, two on the centreline fore, two aft, and three on each side (15cm No. 6 gun had a range at 25º elevation of 16,500m and had an elevation range of -10º to 25º; 250 shells were carried per gun and 5–7 shells could be fired per minute); four 7.5cm Krupp/Siderius anti-aircraft guns, two beneath the foremast and two beneath the aft mast; four 12.7mm Vickers machine guns; 36 Vickers mines. Machinery: *Java*: three Curtis-Parsons-AEG turbines, fired by eight Schultz-Thornycroft boilers, producing 73,000 shaft horsepower and driving three screws at a maximum speed of 30 knots; *Sumatra*: three Zoëlly turbines, fired by eight Schultz-Thornycroft boilers, producing 82,000 shaft horsepower and driving three screws at a maximum speed of 30 knots. Protection: side protection: 75mm; gun shields: 100mm; conning tower: 125mm; armoured deck: 50mm tapering to 25mm. Aircraft: two Fairey S.III floatplanes (1926–1928); two Fokker C.VII-w floatplanes (1929–1937); two Fokker C.XI-w floatplanes (1937–1942).

Sumatra underway after her mid-1930s modernization, which replaced her pole masts. (Nationaal Archief 934-9882)

voor Scheepsbouw, or IvS (a front for AG Vulcan Stettin, AG Weser and Germaniawerft), founded in The Hague in 1922. Admiral Paul Behncke, commander of the post-war German Reichsmarine from 1920 to 1924, insisted that German naval design, particularly U-boat design, be continued clandestinely abroad and was the driving force behind the establishment of IvS. The firm was led by Dr. Ing. Hans Techel, the director of U-boat design at Germaniawerft since 1907, and financial backing was provided indirectly through the Reichsmarine. Techel brought with him a number of experienced German engineers but also recruited Dutch engineers, making IvS a true German-Dutch enterprise. The Koninklijke Marine, through the association of its own personnel with these firms, received access to their technical developments while allowing the Reichsmarine and later Kriegsmarine to cover much of the financial investment.

Admiralen Class Destroyers

Admiralen class destroyer *Kortenaer*, while underway. (Public domain)

Following the political debates in 1919, which almost brought about the cancellation of the Java class cruisers, the Dutch government formed a commission in August 1920 under *Kapitein-zur-zee* Antonie Frederik Gooszen to establish a bare minimum fleet plan for the defence of both Dutch coastal waters and the East Indies. With the end of World War I and the international push for disarmament, political and popular support for expensive battleships and battle cruisers rapidly evaporated. This led the Gooszen Commission to advocate the less expensive fleet plan developed during the war, centred around submarines. The commission continued to push for the acquisition of new surface vessels, however, to support the underwater force. The commission published its report in February 1921 and recommended a significant expansion to the submarine

arm as well as the acquisition of two additional light cruisers and 24 new destroyers to be divided into two groups, constructed and funded over two six-year periods. The large number of destroyers was intended to support the submarines in the East Indies at a ratio of roughly one destroyer to every two to three submarines. The commission did not include the eight Fret class destroyers, built between 1910 and 1914, in its calculations as their 500-ton displacement and age made them unsuitable for offensive high seas use. Even without battleships, this expansion plan would require a doubling of the existing naval budget and it met with immediate political opposition. The Koninklijke Marine pushed for approval of the vessels from just the first of the Gooszen Commission's six-year periods, but even this reduced fleet plan was narrowly voted down in the Tweede Kamer in October 1923. The Dutch state was not in a financially strong position. With Germany being its primary trading partner, the post-war collapse of the German economy caused a financial depression in the Netherlands, the worst effects of which were felt in 1923. Furthermore, there was little popular appetite for new naval construction in the peaceful world naively promised by the League of Nations.

Destroyer *Banckert* (left) departing Den Helder for the East Indies in January 1931, before a crowd of spectators. Her sistership *Witte de With* is in the foreground. (Collectie Regionaal Archief Alkmaar)

Despite the failure to obtain funding for the Gooszen fleet plan, the leadership of the Koninklijke Marine continued its struggle to find new construction funds. The Dutch government could not ignore its obligation to provide at least neutrality protection within the East Indies and it was under that argument that the Koninklijke Marine secured funding for four new destroyers in the fiscal year 1925. With the eight Fret class destroyers unsuited for extensive patrol work in the East Indies, they needed replacements, but the Tweede Kamer initially only provided funding for four new vessels. The Koninklijke Marine estimated that a destroyer twice as large as the Fret class was needed for patrol duties in the East Indies, but Dutch builders had no experience with such a vessel and foreign assistance would be required. Although German naval firms were in the process of setting up shadow facilities in the Netherlands, the Dutch government thought it prudent not to be publicly associated with German military research so soon after the signing of the Treaty of Versailles. The Koninklijke Marine was thus compelled to acquire design and technical

Destroyer *Van Nes* underway at high speed. (Nationaal Archief 935-0179)

assistance from one of the former Allied powers. In 1925 it contracted with the British firm of Yarrow & Company Ltd. of Glasgow for a design based upon the HMS *Ambuscade* prototype destroyer built for the Royal Navy. *Ambuscade*, the first British destroyer to be ordered since World War I, was built to a 1923 Royal Navy request for a new destroyer incorporating the best features of the last classes of destroyers built during the war but with a greater range; *Ambuscade*'s design was considered quite successful and laid the groundwork for the Royal Navy's subsequent A and B classes of destroyers. The first of the Koninklijke Marine's Admiralen class destroyers was laid down in the yard of Burgerhout`s Scheepswerf en Machinefabriek Rotterdam in August 1925.

The poor state of the Dutch economy in the mid-1920s resulted in financial cutbacks for all of the armed services, culminating in a struggle between the

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ADMIRALEN CLASS DESTROYER *KORTENAER*

1. The Admiralen class destroyers were distinct from the destroyers of other navies in that they were equipped to handle floatplanes in order to assist with reconnaissance over the vast area of the East Indies. At the time this seemed like a clever way to maximize the reconnaissance capabilities of a surface force limited in number. In practice however, aircraft operations could only take place under ideal weather conditions, which was rare, and the aircraft were removed prior to World War II in order to free up otherwise congested deck space. Shown here is *Kortenaer* as she appeared in 1930 with a Van Berkel WA floatplane aboard.

Admiralen class specifications (1930)

Dimensions: length: 98.2m; beam: 9.5m; draft: 3m. **Full Displacement**: 1,680 tons. **Ship's Complement**: 149 men. **Armament**: *Evertsen*, *Kortenaer*, *Piet Hein*, *Van Ghent*: four 12cm Bofors L/50 No. 4 guns in individual shielded mounts, all on the centreline (12cm No. 4 gun had a range at 35º elevation of 19,500m and had an elevation range of -5º to 35º; 10 shells could be fired per minute); two 7.5cm Vickers No. 6 anti-aircraft guns, two on a platform between funnels; four 12.7mm Browning machine guns; two triple deck-mounted 53.3cm torpedo tubes; 24 Vickers mines; 12 depth charges; *Banckert*, *Van Galen*, *Van Nes*, *Witte de With*: four 12cm Bofors L/50 No. 5 guns in individual shielded mounts, all on the centreline; one 7.5cm Vickers No. 7/No. 8 anti-aircraft gun, on a platform between funnels; four 40mm Vickers anti-aircraft cannon; four 12.7mm Browning machine guns; two triple deck-mounted 53.3cm torpedo tubes; 12 depth charges. **Machinery**: two Parsons turbines, fired by three Yarrow boilers, producing 31,000 shaft horsepower and driving two screws at a maximum speed of 36 knots. **Aircraft**: one Van Berkel WA or Fokker C.VII-w floatplane.

GERARD CALLENBURGH CLASS DESTROYER *ISAAC SWEERS*

2. Shown here is the Gerard Callenburgh class destroyer, *Isaac Sweers,* as she appeared after she was completed at the Thornycroft yard in Southampton in May 1941. She was lacking her main armament when she escaped from the Netherlands during the German invasion of May 1940 and was armed with six QF 4in Mk XVI guns instead. *Isaac Sweers* served with the Royal Navy in the Mediterranean during Operations Halberd and Perpetual and engaged in a gun dual with the Italian light cruiser *Alberico da Barbiano* in the Battle of Cape Bon in December 1941. She was dispatched to the East Indies in late January 1942 but remained in Ceylon following the Battle of the Java Sea. After a brief period of service in the Indian Ocean, she returned to the European Theatre and took part in the opening stages of Operation Torch in November 1942. On 13 November, she was torpedoed and sunk off Algiers by the German U-boat U-*431*.

Gerard Callenburgh class specifications (1938 as designed)

Dimensions: length: 106.3m; beam: 10.3m; draft: 3.2m. **Full Displacement**: 2,240 tons. **Ship's Complement**: 180 men. **Armament**: five 12cm/45 Wilton-Fijenoord-Bofors Mk. 8 QF guns in two enclosed dual turrets and one enclosed single turret, one on the centreline fore, two aft; four 40mm Bofors L/60 anti-aircraft cannon in two twin mounts on a platform behind the aft 15cm turret; four 12.7mm Vickers machine guns in two dual mounts; six 53.3cm deck-mounted torpedo tubes. **Machinery**: two Parsons-Werkspoor geared turbines, fired by four Yarrow-De Werkspoor boilers, producing 56,000 shaft horsepower and driving two screws at a maximum speed of 32.5 knots. **Protection**: armoured belt: 32mm tapering to 15mm; turrets: 15–25mm fronts and 15mm sides; conning tower: 15mm; armoured deck: 25mm**. Aircraft**: one Fokker C.XI-w floatplane.

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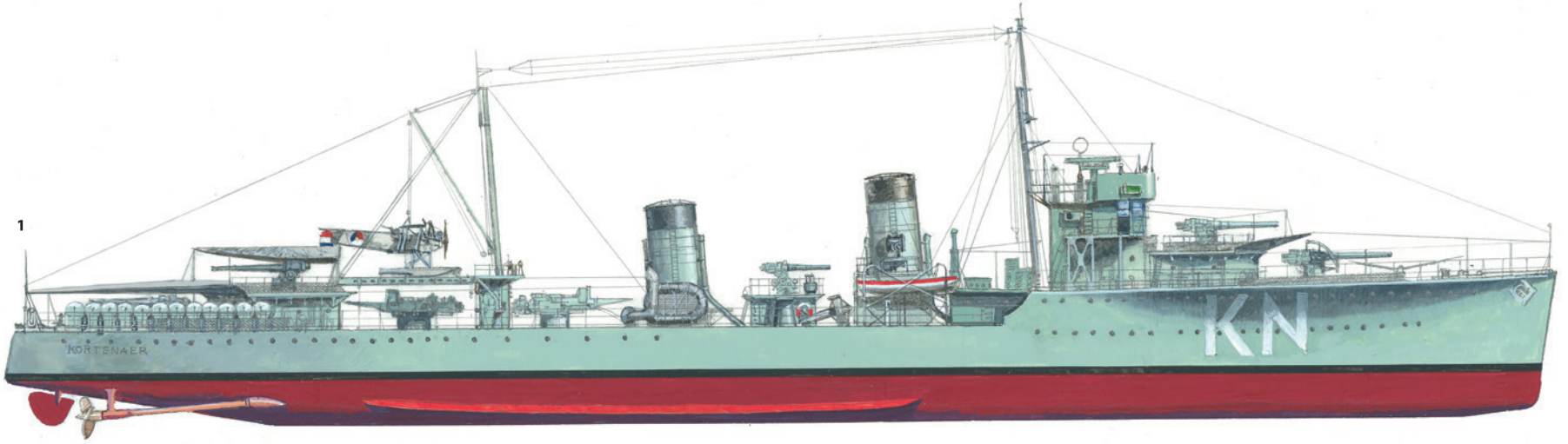

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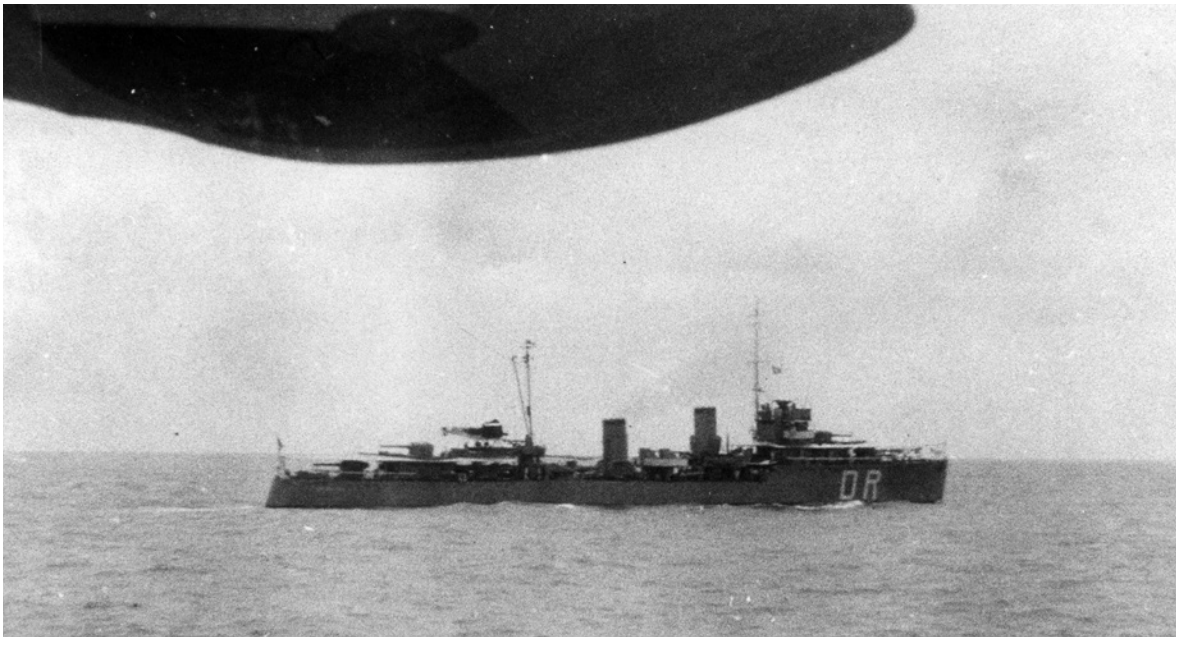


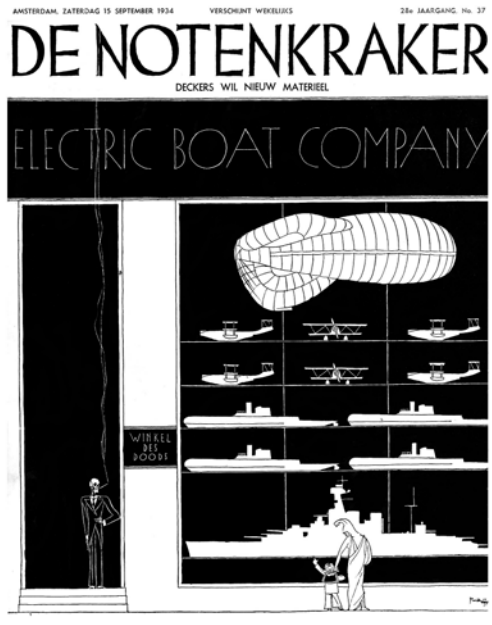
Destroyer *De Ruyter* (renamed *Van Ghent* after the light cruiser *De Ruyter* was laid down) in the East Indies, photographed from a Dutch aircraft; note the Van Berkel WA floatplane on the platform behind the rear turrets. (Author's collection)

OPPOSITE TOP
Cartoon from a September 1934 issue of the leftist satirical Dutch magazine *De Notenkraker*. The caption translated says, 'Deckers wants new material; "So you want new toys. Wouldn't you first try to put your old ones in order?'" (*Wou jij nieuw speelgoed hebben. Zou je niet eerst eens probeeren orde op je oude te stellen?*) criticizing Defence Minister Deckers' efforts to secure funds for new ship construction for the Koninklijke Marine. This is an example of the political rhetoric levelled at the construction of the cruiser *De Ruyter*. (Author's collection)

Koninklijk Nederlands Indisch Leger (Royal Netherlands East Indies Army), or KNIL, and the Koninklijke Marine for access to the limited funds. The rivalry between the two services became so intense that the government formed a commission to re-evaluate the strategic responsibilities of both services in the East Indies, given the present state of financial affairs. The policies drawn up by this commission in 1927, referred to as the *Grondslagen* (or foundations), primarily reiterated the present budgetary status quo and urged the KNIL and Koninklijke Marine to accept the present financial reality. Due in large part to the insistence of Queen Wilhelmina and the East Indies leadership, however, the Grondslagen recognized that present military expenditures were insufficient for any semblance of an effective defence strategy for the East Indies and recommended increased funding for both services once the economy improved. To combat the effects of the post-war depression, the Dutch government returned to the gold standard in 1925 and the Dutch economy began to rebound during the rest of the decade. Due to this upswing, the Tweede Kamer granted the Koninklijke Marine funding for four additional Admiralen class destroyers, two in the fiscal year 1927 and two in 1928.

As mentioned above, the Admiralen class destroyers were built in three batches according to when funding became available. The first four were fitted with minelaying gear while the last four were equipped for minesweeping and also had the addition of four 40mm Vickers pompom anti-aircraft guns. Their main 12cm guns were initially mounted in the open but shields were added later. Upon completion, the Admiralen class vessels saw most of their service in the East Indies, returning to the Netherlands only for thorough refits. They were all in need of modernization by 1940, but the rapid German occupation of the Netherlands prevented the installation of Hazemeyer anti-aircraft systems fitted to other Dutch vessels. The destroyers of the Admiralen class were completed as follows: (1925 fiscal year) *Evertsen* (laid down 5 August 1925, launched 29 September 1926, commissioned

12 April 1928), *Piet Hein* (laid down 26 August 1925, launched 4 April 1927, commissioned 25 June 1928), and *Kortenaer* (laid down 24 August 1925, launched 30 June 1927, commissioned 3 September 1928) at Burgerhout`s Scheepswerf en Machinefabriek; *Van Ghent* (laid down 28 August 1925, launched 23 October 1926, commissioned 31 May 1928) at N.V. De Schelde: (1927 fiscal year) *Van Galen* (laid down 28 May 1927, launched 28 June 1928, commissioned 22 October 1929) and *Witte de With* (laid down 28 May 1927, launched 11 September 1928, commissioned 20 February 1930) at Fijenoord: (1928 fiscal year) *Banckert* (laid down 15 August 1928, launched 14 November 1929, commissioned 14 November 1931) and *Van Nes* (laid down 15 August 1928, launched 20 March 1930, commissioned 12 March 1931) at Burgerhout's.



De Ruyter Class Light Cruiser

Following the 1927 Grondslagen recommendations and as the Dutch economy continued to improve, the leadership of the Koninklijke Marine began to petition the government for the additional vessels originally sought under the Gooszen fleet plan. It argued that its present strength in the East Indies (two light cruisers, eight destroyers and 12 submarines) was routinely weakened when vessels underwent maintenance and repair due to a lack of reserves. Another government commission was formed to evaluate the situation and, in 1930, a new fleet plan, called the *Vlootplan Deckers* after the then defense minister Laurentius Nicolaas Deckers, was unveiled to the Tweede Kamer. For the purposes of adequate defence, it proposed an East Indies fleet made up of three cruisers, 12 destroyers and 18 submarines; this would require the construction of a new cruiser, four destroyers and six submarines. Although a submarine was significantly cheaper than a cruiser (the cost of one cruiser equalled around seven submarines) and a number of its boats were sorely in need of replacement, the Koninklijke Marine's leadership placed the construction of the new cruiser as its highest immediate priority. The purchase of such a vessel resulted in a major backlash from a number of circles. It was criticized by some naval officers who felt the funds should go towards submarine construction, by the KNIL which had

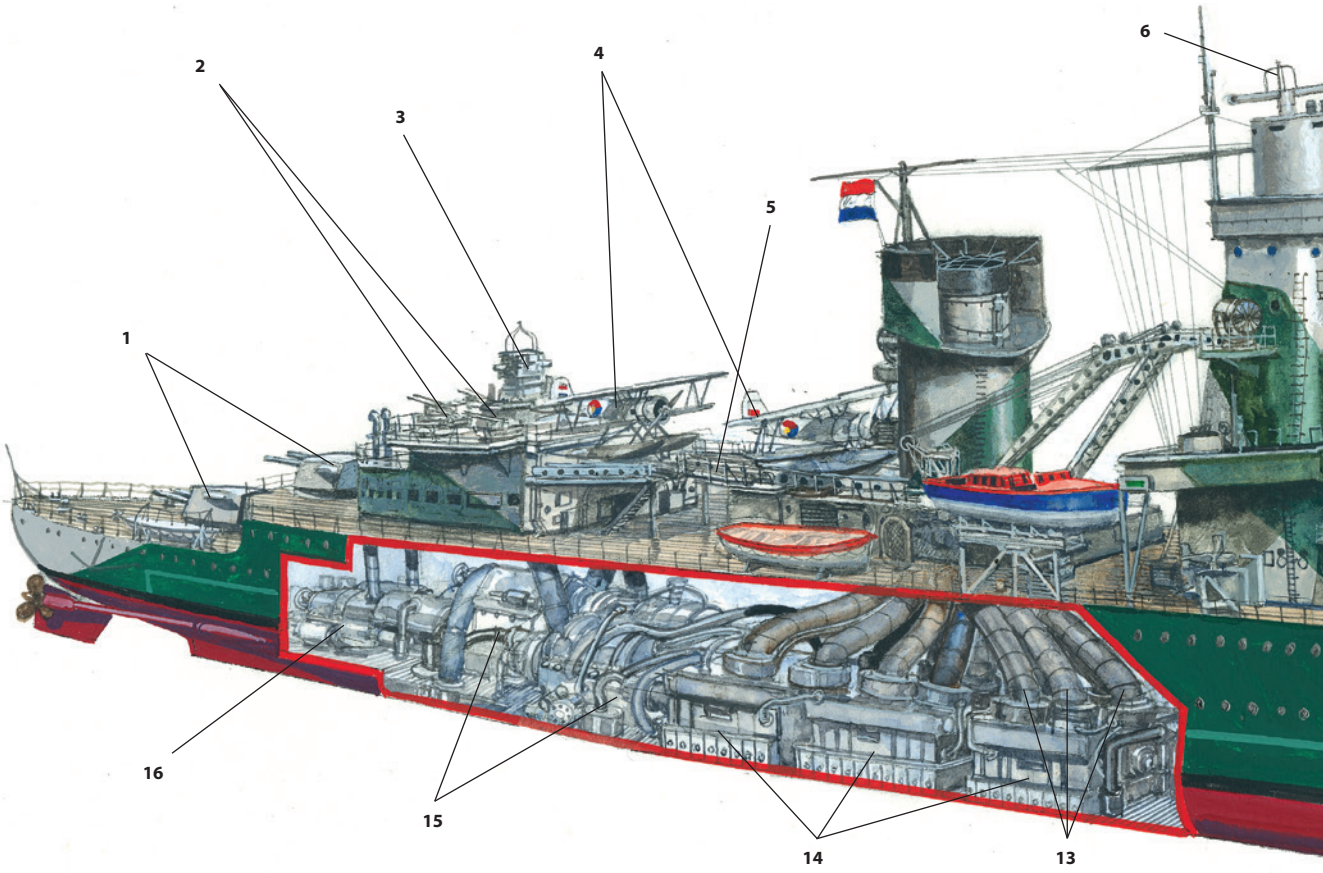
BELOW LEFT
De Ruyter under construction at the Wilton-Fijenoord yard in Schiedam. (Collectie Nederlands Instituut voor Militaire Historie)

BELOW RIGHT
De Ruyter on trials prior to commissioning. (Public domain)

C

DE RUYTER CLASS CRUISER *DE RUYTER* (1942)

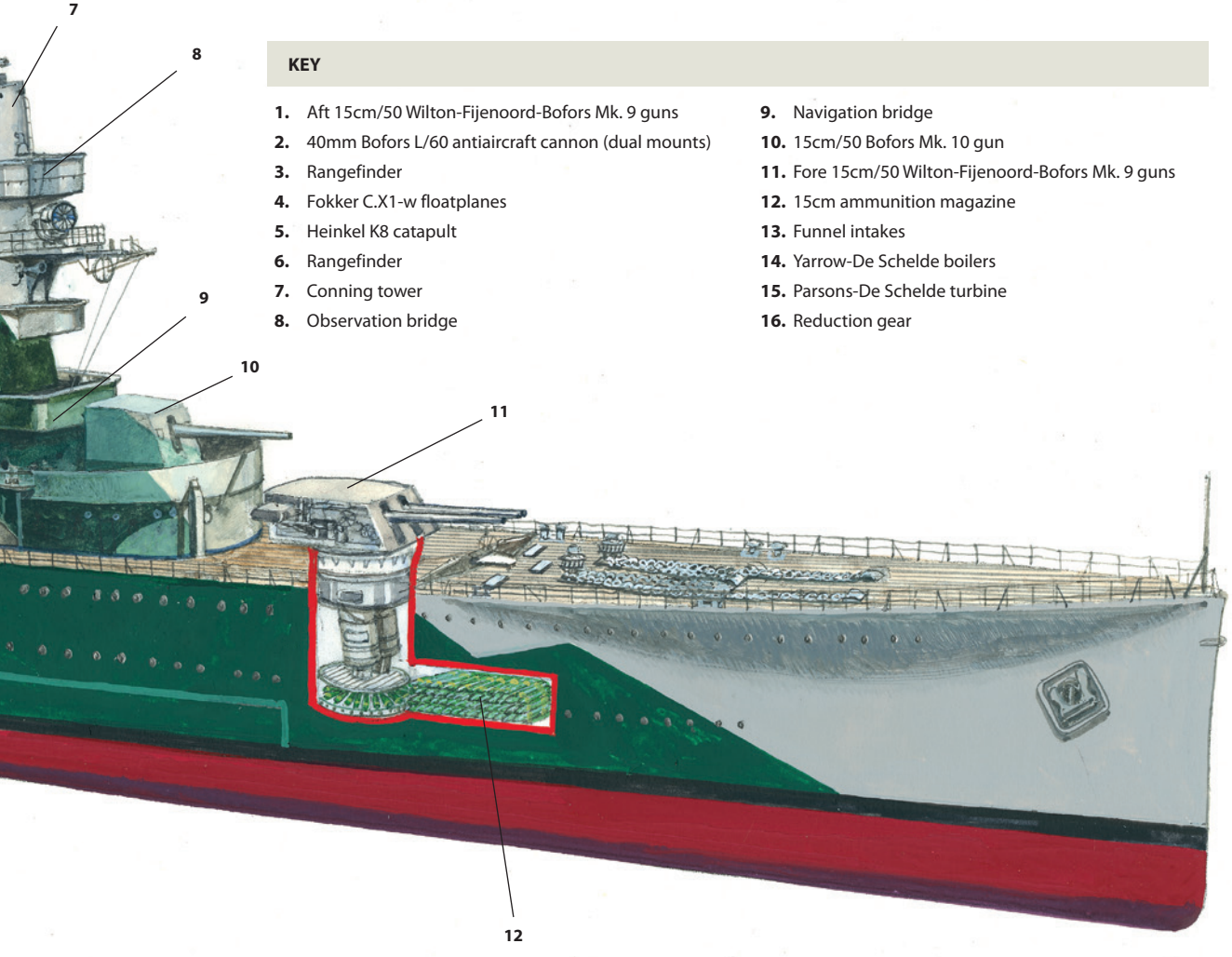
De Ruyter was, and still is, criticized by naval strategists and historians as a vessel of poor design and performance. At first glance, particularly when compared to the British Royal Navy's Leander class light cruisers (the first British post-war purpose-designed light cruisers), *De Ruyter* appears to come up short. The Leander class vessels possessed eight 152mm guns and eight torpedo tubes as well as a 10.2cm-thick armoured belt and 3.2–5.1cm-thick armoured deck while *De Ruyter* was armed with only seven 15cm guns and no torpedo tubes, and protected by a 5.1cm belt and 3cm deck. It should be pointed out though that *De Ruyter* had characteristics similar to the German Königsberg class light cruisers, constructed beginning in 1926; both *De Ruyter* and the Königsberg class vessels utilized the 15cm gun for their main armament, both had a maximum speed of 32 knots, both had a similar protection scheme of a 50mm-thick tapered armoured belt and 20mm–40mm-thick armoured deck, and finally both made considerable use of welding to save weight (however the slightly larger displacement of the German vessels allowed for a total of nine 15cm guns, twelve torpedo tubes and mines). When the Königsberg class cruisers were designed and built, Germany was still beholden to the terms of the Treaty of Versailles, which limited German cruisers to a maximum displacement of 6,000 (standard) tons and this explains the lighter armour and use of welding when compared to the Leander class or other light cruisers of the period. By relying upon the German-influenced IvS design office for *De Ruyter's* design, the Koninklijke Marine was essentially imposing the same unique design limitations upon its cruiser as the German Reichsmarine was subject to.



De Ruyter class specifications

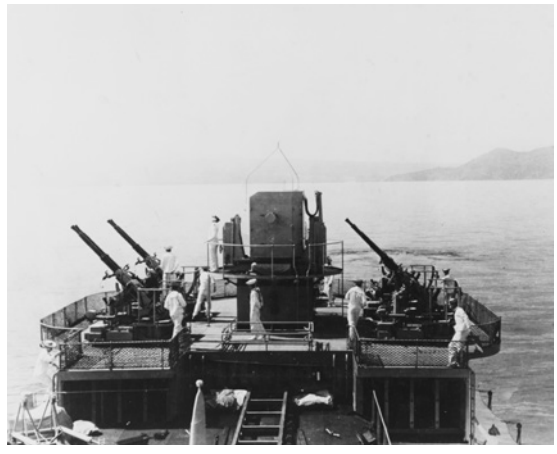
Dimensions: length: 170.8m; beam: 15.6m; draft: 4.9m. **Full Displacement**: 7,822 tons. **Ship's Complement**: 436 men. **Armament**: six 15cm/50 Wilton-Fijenoord-Bofors Mk. 9 guns in three enclosed dual turrets, one on the centreline fore, two aft (15cm Bofors gun had a range at 29° elevation of 21,214m and had an elevation range of -10° to 60°; 5–6 shells could be fired per minute); one 15cm/50 Bofors Mk. 10 gun in a shielded turret on the centreline fore; ten 40mm Bofors L/60 anti-aircraft cannon in five twin mounts on a platform behind the aircraft catapult; eight 12.7mm Browning machine guns. **Machinery**: three Parsons-De Schelde geared turbines, fired by six Yarrow-De Schelde boilers, producing 68,000 shaft horsepower and driving two screws at a maximum speed of 32 knots. **Protection**: armoured belt: 51mm tapering to 30mm on the ends; turrets: 30–50mm fronts and 30mm sides; conning tower: 30mm; armoured deck: 33mm**. Aircraft**: two Fokker C.XI-w floatplanes.

These limitations should not completely overshadow the positive attributes of the vessel, however. *De Ruyter* was the first Dutch warship to carry an aircraft catapult, designed by the German Heinkel firm, which allowed its aircraft to be launched while the vessel was underway. The use of welding by Wilton-Fijenoord in parts of the cruiser's construction was the first time such a method was used on a large Dutch warship and represented a modernization of construction techniques in Dutch yards. The ship's anti-aircraft batteries were perhaps the most modern and effective part of *De Ruyter's* design. The 40mm Bofors L/60 auto-fed cannon, first produced in 1934 and purchased directly by the Koninklijke Marine from the Swedish firm, would go on to become the most popular medium-calibre anti-aircraft gun used by the Allied Powers in World War II. First mounted aboard *De Rutyer*, dual arrangements of these cannon were fitted on stabilized triaxial mounts and connected to a single Hazemeyer tachymetric control system, with firing data calculated by an analogue computer. This automatic fire control system was the most advanced of its time and would be adopted by the British Royal Navy in 1940. Thus, *De Ruyter's* drawbacks should not reflect poorly on the Dutch shipbuilding industry, which had made great technical advances since the end of World War I, but rather were the result of a penurious budget forced upon the Koninklijke Marine by politics and the Great Depression. This cutaway depicts *De Ruyter* as she appeared at the beginning of 1942.



KEY

1. Aft 15cm/50 Wilton-Fijenoord-Bofors Mk. 9 guns
2. 40mm Bofors L/60 antiaircraft cannon (dual mounts)
3. Rangefinder
4. Fokker C.X1-w floatplanes
5. Heinkel K8 catapult
6. Rangefinder
7. Conning tower
8. Observation bridge
9. Navigation bridge
10. 15cm/50 Bofors Mk. 10 gun
11. Fore 15cm/50 Wilton-Fijenoord-Bofors Mk. 9 guns
12. 15cm ammunition magazine
13. Funnel intakes
14. Yarrow-De Schelde boilers
15. Parsons-De Schelde turbine
16. Reduction gear



ABOVE LEFT
De Ruyter's fore 15cm guns firing during an exercise. (Nationaal Archief 934-9811)

ABOVE RIGHT
Anti-aircraft platform on *De Ruyter* with ten twin-mounted 40mm Bofors L/60 cannon, all controlled by the advanced Hazemeyer automatic fire control system. (Naval Heritage and History Command NH 80901)

begun campaigning for a large bomber force aimed at repelling any invasion, and by leftist and pacifist elements in the government – particularly as the worldwide Great Depression was just beginning – which waged a major publicity campaign against the vessel. As government approval for the cruiser was likely to be only narrowly granted, the Koninklijke Marine wanted to waste no time in seeing the ship completed.

The Koninklijke Marine turned to IvS to prepare the design of the new cruiser, intent on taking advantage of the firm's access to recent German design developments. Originally the Koninklijke Marine's leadership wanted a cruiser armed with six 20cm guns and deck-mounted torpedo tubes, which had become the standard armament of heavy cruisers being built by major navies throughout the 1920s. This would have required a displacement of roughly 8,500 tons. Defense minister Deckers was adamant that the projected cost of a heavy cruiser, estimated at 21.5 million Guilders, would be too high for approval by the Tweede Kamer and recommended a smaller vessel of 5,250 tons armed with six 15cm guns but no torpedoes – the Tweede Kamer was only willing to spend up to 12.5 million Guilders for the cruiser at that time. The effects of the Great Depression were not fully felt in the Netherlands and the East Indies until 1931, at which time the requirements of the third cruiser were being determined. The economic downturn made even Deckers' smaller design appear too expensive and slowed all new naval acquisition and construction. The Koninklijke Marine's strategists were opposed to Deckers' smaller design, insisting that it was too lightly armed and armoured to be of use as even a light cruiser. A compromise proposal was finally worked out between Deckers and the Koninklijke Marine in 1932. By officially calling the design a *flottieljeleider* (flotilla leader), Deckers was able to justify the larger displacement as well as to lengthen the vessel in order to increase its maximum speed to 32 knots, with this extra space allowing for the mounting of another two 15cm guns. The Tweede Kamer agreed to the revised specifications after Deckers made the argument that the ship was necessary to maintain some level of employment in the shipyards during the depression. In a largely symbolic gesture, however, the Tweede Kamer insisted that only one extra 15cm gun be mounted. IvS finalized a design based upon these limitations. The imposingly high bridge tower, straight bow stem, and single large funnel gave the cruiser an appearance similar to the German *Panzerschiffe Admiral Scheer* and *Admiral Graf Spee* at a

distance, clearly highlighting the German design influence at IvS. Despite all the negotiation and compromise required to ensure that the construction of the cruiser was approved by the Tweede Kamer, however, political decisions kept the vessel from having a competitive armament. NV Dok en Werf Maatschappij Wilton–Fijenoord (formed in 1929 through a merger between Fijenoord and Wilton's Dok en Werf Maatschappij) in Schiedam received the contract to build the new cruiser, named *De Ruyter*, and she was laid down on 16 September 1933. She was launched on 11 May 1935 and commissioned on 3 October 1936.

Tromp Class Torpedokruiser/Light Cruisers

As the Vlootplan Deckers was being formulated, the Koninklijke Marine's leadership again requested the two additional 'light cruisers' that had been recommended by the Gooszen Commission. These vessels were referred to as *torpedokruisers*, or torpedo cruisers, and were an updated version of a scout cruiser concept considered by the Koninklijke Marine prior to the construction of the Java class cruisers. This new scout cruiser was to be as fast as contemporary destroyers but possess a larger armament, and thus be capable of serving as a destroyer flotilla leader. The need for such a vessel was brought about by the construction of the Imperial Japanese Navy's 24 Fubuki class destroyers, beginning in 1926. With a maximum speed of 38 knots, an armament of six 12.7cm guns in enclosed turrets and nine torpedo tubes, the Fubuki class vessels were faster and more powerful than most destroyers and some light cruisers in the navies of its rivals. Although the Admiralen class destroyers were contemporaries of the Fubuki class, they were far outmatched. The torpedokruiser was seen as a financially prudent stopgap measure to keep the Admiralen class destroyers competitive, as the acquisition of new destroyers in quantity was out of the question. As flotilla leaders, the new torpedokruisers were intended to cover the operations of the destroyers and outgun attacks made by Japanese destroyers. They also had to be powerful enough to hold their own against 14cm-gunned Japanese light cruisers, which would likely serve as destroyer flotilla leaders in their own right. In a variation of Risikogedanke, it was hoped that the presence of such vessels might deter operations made by Japanese destroyers alone. For purposes of political expediency however, the Vlootplan Deckers referred to the torpedokruisers as 'destroyer flotilla leaders' (*flottieljeleiders*) so as not to appear heavy-handed in requesting a total of three new cruisers. To enhance their chance of approval, the

BELOW LEFT
Torpedokruiser *Tromp* being launched at the Nederlandsche Scheepsbouw-Maatschappij yard in Amsterdam on 24 May 1937. (Author's collection)

BELOW RIGHT
Torpedokruiser *Jacob van Heemskerck* (left) under construction, alongside the Stoomvaart Maatschappij Nederland liner *Oranje* (right), at the Nederlandsche Scheepsbouw-Maatschappij. (Stadsarchief Amsterdam)

Tromp underway prior to World War II. (Author's collection)

plan stated that they would serve as replacements for the old Pantserschepen *Hertog Hendrik* and *Jacob van Heemskerck* and thus not be considered as 'additional' vessels.

The basis for the design of the torpedokruisers came from preliminary sketches for a flotilla leader prepared in 1930 by the British firms of John I. Thornycroft & Company Ltd. and Yarrow & Company Ltd. at the request of the Koninklijke Marine. Neither of these preliminary designs were purchased but they laid the groundwork for a definitive design prepared by the Nederlandsche Vereeniging Scheepsbouw Bureaux, or NEVESBU, a design office established in 1935 by several Dutch shipyards. The result was a 4,225-ton (full displacement) vessel armed with six 15cm guns and six torpedo tubes with a 32.5-knot maximum speed. This design was similar in concept and armament to the Guépard class *contre-torpilleurs* (large destroyers) built for the French *Marine National* beginning in 1927, intended as flotilla leaders but able to cross swords with lightly armoured enemy light cruisers. Unlike the French contre-torpilleurs, the torpedokruiser design possessed an armoured belt, between 32mm and 15mm thick, and a 25mm-thick armoured deck

D

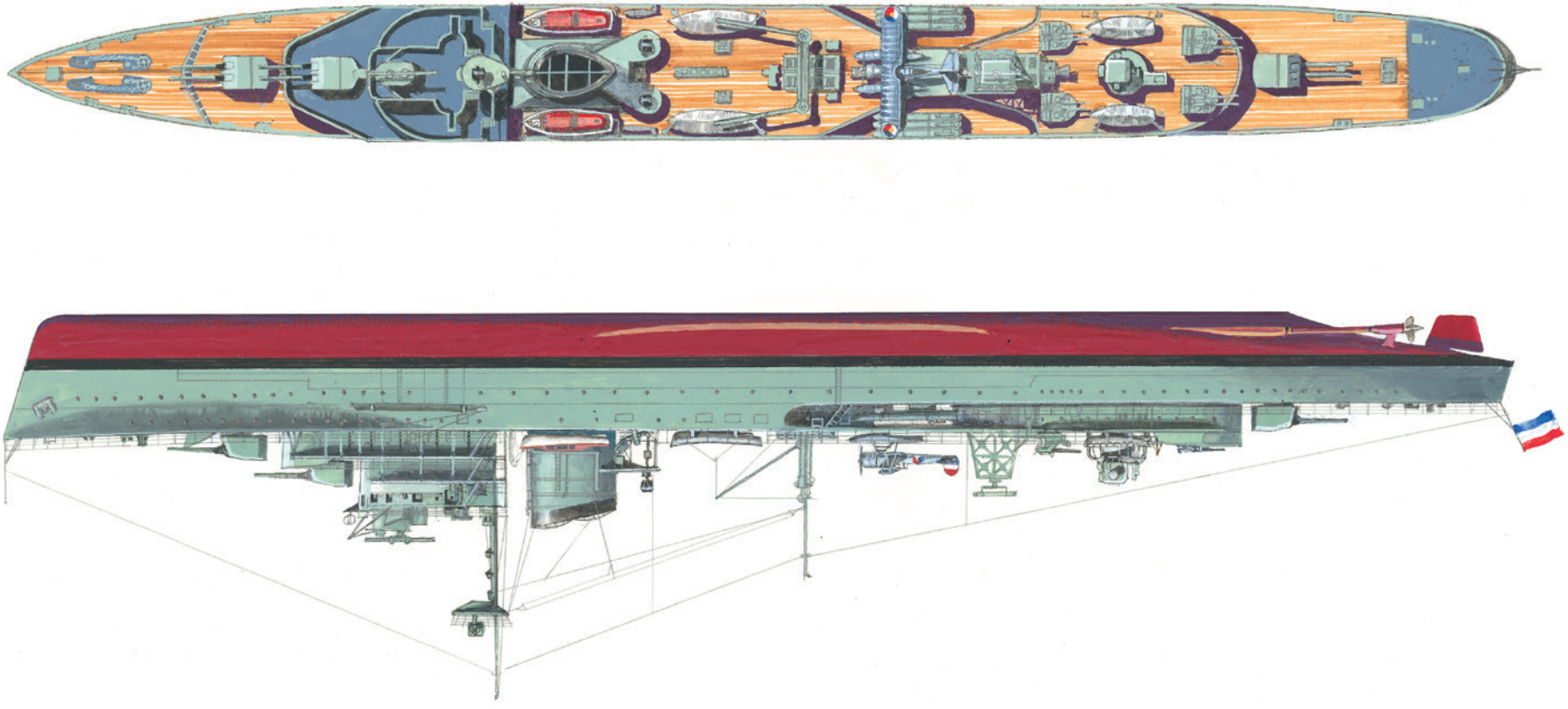
TROMP CLASS LIGHT CRUISER *TROMP* (1938)

Tromp was in the East Indies when Germany invaded the Netherlands and served there until being damaged in combat with Japanese destroyers during the Battle of Bandoeng Strait on 20 February 1942. She was in Australia under repair when the East Indies capitulated to the Japanese and, when repaired in April, she served as an escort for convoys to and from Australia until the beginning of 1944. *Tromp* was then assigned to the British Eastern Fleet and took part in British carrier raids on Sumatra (Operation Cockpit) and Java (Operation Transom) in spring 1944. In July 1945 *Tromp* participated in the Allied invasion of Borneo (Operation Oboe), bombarding enemy troop positions. *Tromp* is shown here as she appeared when commissioned in 1938.

When *Jacob van Heemskerck* escaped the German occupation of the Netherlands in May 1940, she arrived in Great Britain only partially completed and lacking her fire control equipment. It was decided to reconfigure the vessel as an anti-aircraft cruiser and she was armed with ten QF 4in Mk XVI guns, eight 40mm Bofors and six 20mm Oerlikon anti-aircraft guns. After several months of convoy escort duty in the Atlantic, *Jacob van Heemskerck* was sent to reinforce the Far East in January 1942 but was recalled to Ceylon after the Battle of the Java Sea. From spring 1942 to early 1944, she served with the British Eastern Fleet in the Indian Ocean and then returned to England for a major refit, which lasted until the end of the war.

Tromp class specifications (1938)

Dimensions: length: 132m; beam: 12.4m; draft: 4.3m. **Full Displacement**: 4,225 tons**.**
Ship's Complement: 295 men. **Armament**: six 15cm/50 Wilton-Fijenoord-Bofors Mk. 11 guns in three enclosed dual turrets, two on the centreline fore, one aft; four 40mm Bofors L/60 anti-aircraft cannon in two twin mounts on a platform behind the aft 15cm turret; four 12.7mm Vickers machine guns in two dual mounts; six 53.3cm deck-mounted torpedo tubes**.**
Machinery: two Parsons-Werkspoor geared turbines, fired by four Yarrow-De Werkspoor boilers, producing 56,000 shaft horsepower and driving two screws at a maximum speed of 32.5 knots.
Protection: armoured belt: 32mm tapering to 15mm; turrets: 15–25mm front and 15mm sides; conning tower: 15mm; armoured deck: 25mm. Aircraft: one Fokker C.XI-w floatplane.



Destroyer *Isaac Sweers* after being completed by Thornycroft in Great Britain in 1941. She served with the British Royal Navy until sunk by a U-boat off the Algerian coast during Operation *Torch* in November 1942. (Nationaal Archief 934-9827)

that, while not strong enough to protect against light cruiser armament, was effective against destroyer armament, particularly as most destroyers did not carry armour-piercing shells. With its torpedo tubes (the first major Dutch surface vessel to be so equipped), the torpedokruiser arguably possessed superior armament to the much larger *De Ruyter*. Construction of the torpedokruisers was postponed for several years due to the Great Depression but in 1936, as the Dutch economy began to improve following the country's abandonment of the gold standard, the Koninklijke Marine pressed the Tweede Kamer for funding of at least one vessel. The first torpedokruiser, *Tromp*, was laid down at Nederlandsche Scheepsbouw-Maatschappij in Amsterdam on 17 January 1936, launched on 24 May 1937, and commissioned on 18 August 1938. Funding for the second vessel, *Jacob van Heemskerck*, was not made available until 1938; she was laid down at Nederlandsche Scheepsbouw-Maatschappij on 31 October 1938, launched on 16 September 1939 and commissioned on 10 May 1940, the day Germany invaded the Netherlands in World War II.

Gerard Callenburgh Class Destroyers

The last surface vessels of the Vlootplan Deckers to receive funding were the four new destroyers of the Gerard Callenburgh class. With assistance provided by Yarrow & Company Ltd., NEVESBU prepared a design for a 2,200-ton (full displacement) vessel armed with five 12cm guns and eight torpedo tubes with a maximum speed of 36 knots. This was a superior armament compared to that of the Tribal class destroyers then entering service with the British Royal Navy and a better match than the Admiralen class destroyers for the Fubuki class destroyers and subsequent classes being built for the Imperial Japanese Navy.

Aerial photo of destroyer *Isaac Sweers* underway, clearly showing her gunnery, torpedo and anti-aircraft arrangements. (Nationaal Archief 934-9830)

In March 1938 during the Spanish Civil War, the leadership of the Koninklijke Marine was impressed by the sinking of the Spanish Nationalist heavy cruiser *Baleares* by torpedoes fired by three Spanish Republican destroyers. They subsequently placed a new emphasis on torpedo armament for vessels coming into service, beginning with the Tromp class cruisers and the new destroyers. This resulted in the eight 53.3cm deck-mounted torpedo

tubes being added to the Gerard Callenburgh class vessels, as well as the beginning of extensive training in torpedo tactics for the East Indies fleet; its officers emphasized night-time torpedo training in particular as a tactical way to offset the likely numerical advantage possessed by a Japanese invasion force. Funding for the new destroyers was provided in 1938 and they were laid down as follows: *Tjerk Hiddes* (laid down on 1 October 1938 and launched on 12 October 1939) and *Gerard Callenburgh* (laid down on 12 October 1938 and launched on 12 October 1939) at the Rotterdamse Droogdok Maatschappij in Rotterdam; *Isaac Sweers* (laid down on 26 November 1938 and launched on 16 March 1940) and *Philips van Almonde* (laid down on 2 March 1939) at De Schelde.

SUBMARINES OF THE KONINKLIJKE MARINE

The *Onderzeedienst*, or submarine service, of the Koninklijke Marine was founded on 21 December 1906, the same day that its first submarine, *O* (*Onderzeeboot*) *1*, was commissioned. The Koninklijke Marine initially only saw a use for submarines in a coastal defence role due to their limited range, speed and armament, and the first 'O' boats were ordered with the intention of being used only in home waters. One of the leading advocates for the development of a Dutch submarine force was Joannes Benedictus van Heutsz, Governor-General of the East Indies, 1904–09, who saw the new technology as a more affordable means of naval protection for the archipelago rather than *Pantserschepen* or battleships. Heutsz pointed out that the numerous straits throughout the East Indies archipelago were more-or-less coastal areas from which submarines with short ranges could effectively operate. The leadership of the Koninklijke Marine eventually began to recognize this strategic perspective and, with the *ministerie van Koloniën*, or colonial ministry, footing the bill, ordered the first 'K' (*Koloniën*) boat, *K I*, in 1910. The 'K' boats, designated by Roman numerals, were larger and had a greater patrolling radius than the 'O' boats, designated with Arabic numerals; furthermore the 'K' boats were funded by the colonial ministry while the 'O' boats were paid for by the *ministerie van defensie*, or defence ministry. The first classes of Dutch submarines were constructed by De Schelde and Fijenoord, but were all built according to foreign designs from the American Holland Torpedo Boat Co. and Electric Boat Company firms, as well as the British William Denny and Brothers firm and the Austro-Hungarian firm of Whitehead & Co.

Submarine *O 13* under construction at De Schelde. Completed in 1931, she was one of the last boats ordered by naval minister Rambonnet in 1918. The lengthy completion time of her class was indicative of political battles over naval funding in the Netherlands during the interwar years. Nevertheless, the delays allowed for design and technological refinements from German naval designers who relocated to the Netherlands after World War I. (Author's collection)

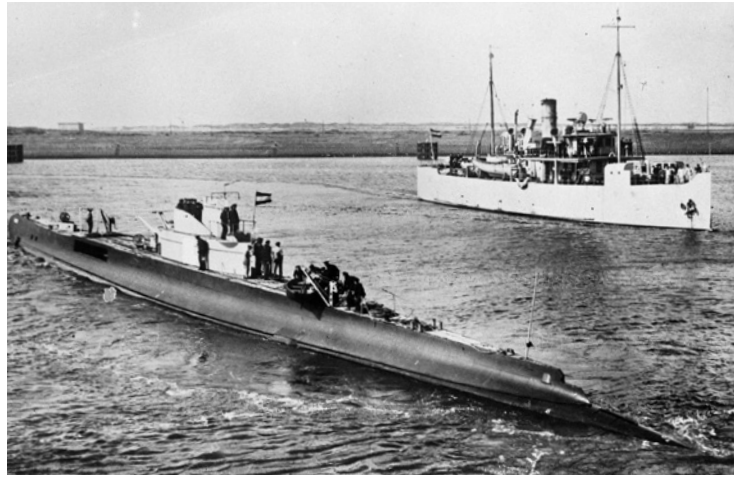
As mentioned earlier, the leadership of the Koninklijke Marine turned its attention to submarines as the strategic backbone of the battlefleet during World War I, when dreadnought construction had to be shelved.

Torpedo boat *Z 8* leading two 'O' boats out to sea from Den Helder for an exercise in 1935; destroyer *Van Nes* is moored to the right. The Koninklijke Marine's Onderzeedienst developed and perfected divisional attack tactics throughout the 1920s and 1930s, well ahead of the German Kriegsmarine's 'Wolf Pack' tactics. (Collectie Regionaal Archief Alkmaar)

This was largely a matter of practicality, as Dutch shipyards had the facilities and experience to construct foreign-designed submarines and the lower price tag of the vessels helped to obtain parliamentary approval. During the war, naval minister Rambonnet secured funding for 18 submarines: the six coastal boats of the O 9 (*O 9*, *O 10* and *O 11*) and the first three boats of the O 12 (*O 12*, *O 13* and *O 14*) classes and the 12 patrol boats of the K II, K III (*K III* and *K IV*), K V (*K V*, *K VI* and *K VII*), K VIII (*K VIII*, *K IX* and *K X*) and K XI (*K XI*, *K XII* and *K XIII*) classes. Construction was slow due to an immediate lack of foreign technical assistance and specialized equipment, so the last of these vessels ordered during Rambonnet's tenure as minister was not delivered until 1932. The O 9, O 12 and K XI classes were the Koninklijke Marine's first domestic submarine designs, however, and required lengthier development time. Using technical knowledge gained from British and German submarines, both of which were interned in the Netherlands during the war, Koninklijke Marine engineer J.J. van der Struyff developed the designs for these classes in the early 1920s. They were larger and had better performance than any of the pre-war foreign designs that had been utilized before. Some further technical assistance was obtained during and shortly after World War I from Germaniawerft, the primary German U-boat builder, which resulted in the use of a double hull and adoption of electric welding in the construction of the O 12 and K XI classes. This research and development were well timed with the post-war Gooszen Commission's recommendation for an expansion of the Onderzeedienst, as dictated by the Koninklijke Marine's submarine-centred fleet strategy. The commission's proposed fleet plan called for the acquisition of 33 new boats (21 for the East Indies and 12 for home waters), not counting those already ordered or under construction, to be built over a period of 12 years. The enthusiasm about a large submarine force was short-lived, however, as the Koninklijke Marine failed to get even half of this plan approved in the Tweede Kamer in October 1923. No funding was provided for new submarine construction for the remainder of the decade.

The Vlootplan Deckers of 1930, as mentioned before, set the composition of the East Indies fleet as three cruisers, two torpedo cruisers, 12 destroyers and 18 submarines; it also allowed for eight submarines to be based in Dutch home waters with inexpensive mine vessels and gunboats making up the remainder of the naval defence of the home country. Due to the political and financial circumstances resulting from the Depression, funding for new submarines was initially only authorized for replacement boats no longer fit for active duty. Spending was approved for four new submarines in 1930, to replace *O 5*, *K II*, *K III* and *K IV* and two more the following year to replace *K V* and *K VI*.

O 15, replacing *O 5*, was another O 12 class boat and was laid down over a year after her sisters. Although the O 12 class was initially authorized in 1918, the decade-long delay in their construction allowed for a thorough refinement of their original design, taking advantage of the former Germaniawerft and other experienced engineers at IvS. The O 12 class, which borrowed elements from the Kaiserliche Marine's Type UB III coastal boat design of 1916, were the first submarines designed in the Netherlands with a streamlined hull shape as well as the first to be able to operate at a maximum depth of 260ft.



K XIV class submarine *K XVII* alongside the minelayer *Medusa*. Note the more-refined hull of *K XVII* compared to the earlier photo of *O 13*. (Nationaal Archief 935-0255)

Hans Techel and his design team at IvS used improved versions of the Type UB III design as the groundwork for several classes of boats prepared for other navies as well. The first of these, the two submarines of the Birinci İnönü class, were constructed for the Turkish Navy by Wilton-Fijenoord beginning in 1926. The three Vetehinen class submarines, built for the Finnish Navy by Crichton-Vulcan in Turku, and the *E 1*, built on speculation for the Spanish Navy by the firm of Echevarrieta y Larrinaga in Cadiz and later sold to Turkey as *Gür*, were from UB III-based designs prepared by IvS. These classes later formed the basis of the Kriegsmarine's Type U I and Type U VII (of which 703 were produced) classes and the Soviet Navy's S (Srednaja) class. The valuable experience gained from the design of these boats would be applied to the new submarines built for the Koninklijke Marine in the 1930s.

The K XIV class, replacing the early K boats, was the last design prepared under the supervision of J.J. van der Struyff and was a larger design based on improvements made in the O 12 class and in the designs prepared by IvS for Turkey, Finland and Spain. The extensive use of welding, perfected in the smaller classes of previous boats, resulted in a stronger yet lighter hull that allowed for the addition of eight 53.3cm torpedo tubes, as opposed to two 53.3cm and four 45cm in the K XI class, as well as the installation of larger and more powerful eight-cylinder diesel engines that increased the operational range of the boats to 10,000nm – an almost threefold improvement over that of the K XI class.

O 21 class submarine *O 21* under construction at the Rotterdamse Droogdok Maatschappij yard. (Author's collection)

The K XIV class boats were also equipped with two 1,600hp MAN diesel engines. As with other marine technical platforms, Dutch shipbuilding firms sourced diesel engine designs from foreign manufacturers to save on research and design costs. Wilton-Fijenoord purchased licenses for diesel engine production from the German firm MAN (Maschinenfabrik Augsburg-Nürnberg AG) beginning in 1923 and De Schelde began purchasing licenses from the Swiss firm of Sulzer AG in 1921.

Perhaps the most significant innovation found in the K XIV class boats was the *radioperiscoop*, or retractable radio antenna installed behind the periscopes, which allowed the submarine to transmit and receive short wave radio signals while submerged; this was the first successful implementation of such a device aboard a submarine and would have significant tactical and strategic ramifications.

The five boats of the K XIV class were built as follows: *K XIV* (laid down on 31 May 1930, launched on 11 June 1932 and commissioned on 6 July 1933); *K XV* (laid down on 31 May 1930, launched on 10 December

E

SUBMARINES

K XIV Class

1.Of the five K XIV boats, *K XVI*, *K XVII* and *K XVIII* were all lost in the early months of the Pacific War. *K XIV* and *K XV* were able to escape to Ceylon during the Japanese conquest of the East Indies and from there went on to the United States for extensive overhauls. In early 1944, both boats were sent to Australia and, for the remainder of the war, they undertook patrol missions in Southeast Asia and also participated in several clandestine agent insertion missions in the occupied East Indies for the Netherlands Forces Intelligence Service. *K XIV* is shown here.

K XIV class specifications

Dimensions: length: 73.4m; beam: 6.5m; draft: 3.9m. **Full Displacement**: 1,105 tons. **Ship's Complement**: 36 men. **Armament**: six 53.3cm internal torpedo tubes, four fore and two aft; two external trainable 53.3cm torpedo tubes located midships; one 8.8cm deck gun; two 40mm Bofors anti-aircraft guns. **Machinery**: two MAN 8-cylinder diesel engines, producing 1,600 shaft horsepower and driving two screws at a maximum speed of 17 knots on the surface; two 430hp electric engines with a maximum underwater speed of 9 knots. **Maximum Depth**: 260ft

O 19 Class

2. *O 19* served in the East Indies until the colony's surrender, escaping to Ceylon. She was sent to Great Britain for maintenance and remained in British waters until summer 1944. After several months of minelaying exercises, she returned to the Far East and from Australia conducted a number of combat patrols in which she sank six enemy vessels. *O 19* was scuttled by her crew in June 1945 after running aground on a reef in the South China Sea. *O 19* is shown here.

The O 21 class submarine design was a variant of the O 19 class with the minelaying tubes omitted and had very similar specifications. *O 21*, *O 22*, *O 23*, and *O 24* made their way to Great Britain during the German invasion of the Netherlands and were completed in British yards. *O 22* was lost with all hands on a patrol in the North Sea in December 1940, but the other three boats survived the war. *O 21*, *O 23* and *O 24*, while serving alongside the Royal Navy, operated in the waters around Great Britain, the Mediterranean, the Indian Ocean and the sea lanes throughout Southeast Asia, where together they sank over 55,000 tons of German, Italian and Japanese shipping.

O 19 class specifications

Dimensions: length: 80.7m; beam: 7.4m; draft: 3.9m. **Full Displacement**: 1,491 tons. **Ship's Complement**: 40 men. **Armament**: six 53.3cm internal torpedo tubes, four fore and two aft; two external trainable 53.3cm torpedo tubes located midships; one 8.8cm deck gun; two 40mm Bofors anti-aircraft guns; one 12.7mm Browning machine gun; 40 Vickers mines in 20 Normand-Fenaux external mine tubes, ten on each side. **Machinery**: two De Schelde-Sulzer 7-cylinder diesel engines, producing 2,650 shaft horsepower and driving two screws at a maximum speed of 19.5 knots on the surface; two 500hp electric engines with a maximum underwater speed of 9 knots. **Maximum Depth**: 330ft

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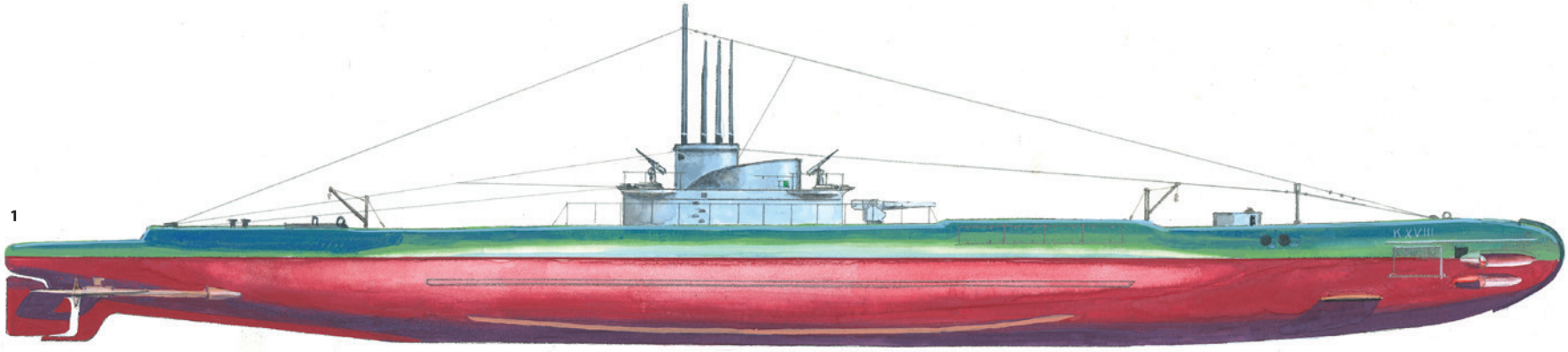

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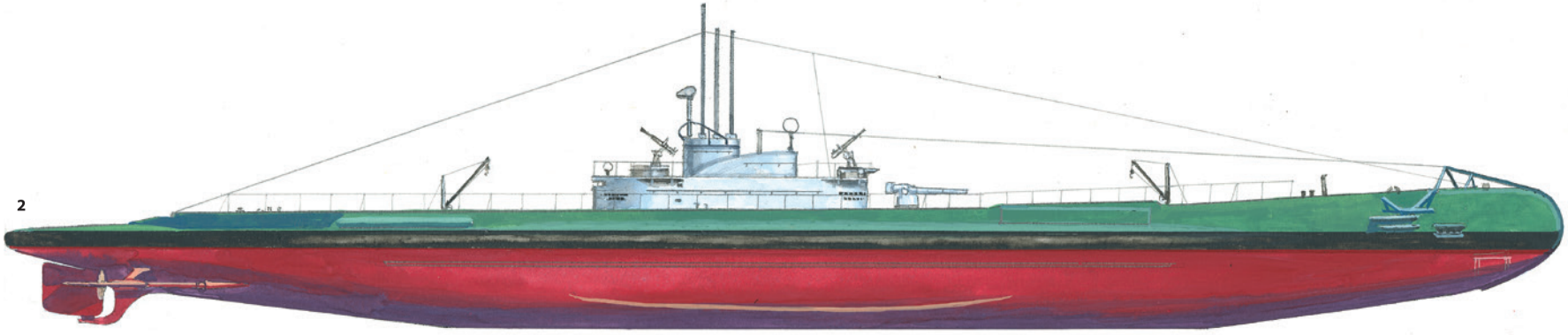
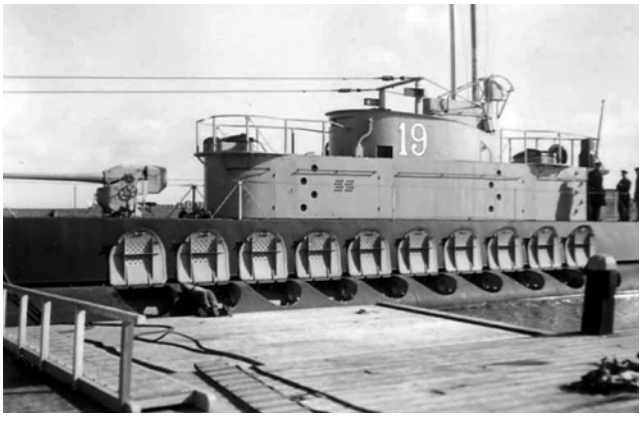
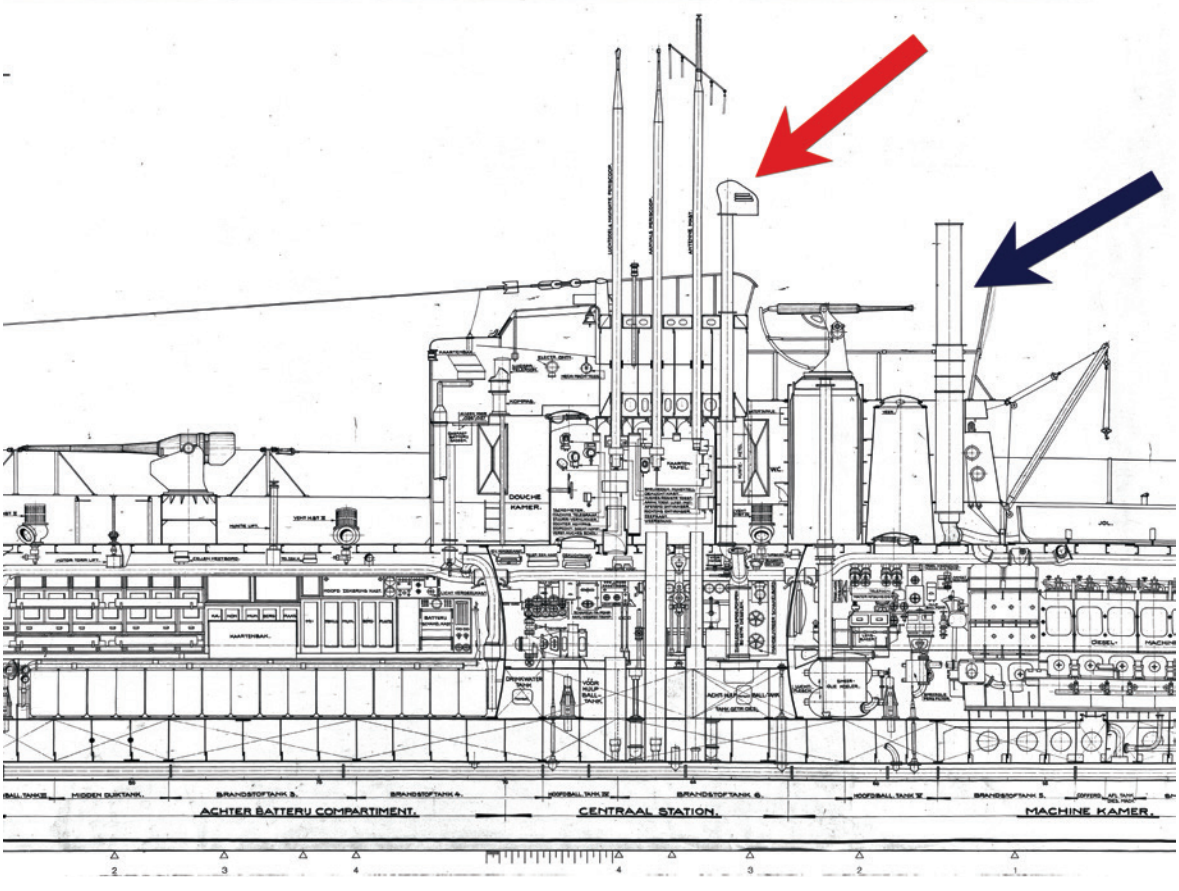




Submarine *O 19* with the hatch to her portside Normand-Fenaux external mine tubes opened. (Author's collection)

1932 and commissioned on 30 December 1933); and *K XVI* (laid down on 31 May 1930, launched on 4 April 1933 and commissioned on 31 January 1934) at Rotterdamse Droogdok Maatschappij; *K XVII* (laid down on 1 June 1931, launched on 26 July 1932 and commissioned on 19 December 1933); *K XVIII* (laid down on 10 June 1931, launched on 27 September 1932 and commissioned on 23 March 1934) at Wilton-Fijenoord.

In 1933, a replacement for the *O 6* was approved and De Schelde was contracted for the new boat, *O 16*. Despite the 'O' designation (due to being funded by the ministry of defence), she was intended for service in the East Indies; all submarines built after *O 16* were planned for use in home and colonial waters and the 'K' prefix was no longer used. *O 16* was a completely new design prepared by Gerhard de Rooy, the chief constructor of the Koninklijke Marine. A higher quality steel was used in her construction, resulting in a strengthened hull, and improved welding techniques further cut back on weight attributed to rivets. *O 16* was larger than the K XIV class boats but was faster and more manoeuvrable



due to an improved hull design that had been extensively tested at the research facilities at the Nederlands Scheepsbouwkundig Proefstation in Wageningen. *O 16* was laid down on 28 December 1933, launched on 27 January 1936 and commissioned on 26 October 1936.

The structural and streamlining refinements pioneered in *O 16* were utilized in the last two classes of submarine built for the Koninklijke Marine prior to World War II: the two boats of the O 19 and seven boats of the O 21 classes. *O 19* and *O 20* were intended to replace *K VII* and *K VIII* while *O 21–O 27* were allotted as the last of the 18 submarines for the East Indies fleet promised by the Vlootplan Deckers. These classes were nearly identical, with the primary difference being that O 19 boats were equipped with mine tubes on each side amidships, each capable of holding ten mines. The hull of these classes, made of welded high-tensile steel plates, could withstand a maximum operational depth of 330ft and the seven-cylinder Sulzer diesels could propel these boats at 19.5 knots on the surface. The O 19 and O 21 classes were also equipped with a *snuiver* (snorkel) device, tested in the *O 16*, which fed air from above the surface to the boat's diesel engines while submerged, greatly increasing their underwater range. As early as 1916, the Onderzeedienst experimented with retractable ventilation tubes that allowed its boats to submerge up to the conning tower in fair weather. This semi-submerged operation of the boats' diesel engines was referred to as *getrimd dieselen*. The definitive version of the snuiver device fitted to the O 21 boats consisted of a retractable air intake and a retractable exhaust pipe, allowing for the operation of one of the diesel engines while submerged. This was the first successful deployment of a snorkel device on a submarine in service. The O 19 and O 21 class submarines were laid down as follows: *O 19* (laid down on 15 June 1936, launched on 22 September 1938 and commissioned on 3 July 1939) and *O 20* (laid down on 15 June 1936, launched on 31 January 1939 and commissioned on 28 August 1939) at Wilton-Fijenoord; *O 21* (laid down on 20 November 1937, launched on 31 October 1939 and commissioned on 10 May 1940) and *O 22* (laid down on 20 November 1937, launched on 20 January 1940 and commissioned on 10 May 1940) at De Schelde; *O 25* (laid down on 10 April 1939 and launched on 1 May 1940) at Wilton-Fijenoord; *O 23* (laid down on 12 October 1937, launched on 5 December 1939 and commissioned on 13 May 1940), *O 24* (laid down on 12 November 1937, launched on 18 March 1940 and commissioned on 13 May 1940); *O 26* (laid down on 20 April 1939) and *O 27* (laid down on 3 August 1939) at Rotterdamse Droogdok Maatschappij.

Beginning shortly after the end of World War I, the Onderzeedienst began experimenting with group attack tactics in exercises in the North Sea after learning of similar German trials in the last months of the war. These exercises proved the effectiveness of such tactics. They were then tested in the East Indies where their potential against a surface invasion force, operating within the narrow confines of the numerous straits in the archipelago, was quickly realized. Submarines were subsequently organized into divisions of four boats and trained to operate in concert with each other. When these exercises

During the interwar years, radio-equipped flying boats of the Marine Luchtvaartdienst (MLD), such as the Dornier Do-24, were used to scout for and direct submarines equipped with a retractable *radioperiscoop*, resulting in well-coordinated group attack tactics. This Do-24 in MLD markings is preserved at the Nationaal Militair Museum in Soest. (Author's collection)

OPPOSITE
Blueprints of the conning tower area of the O 21 class submarines detailing the *Snuiver*, or snorkel, arrangement. The red arrow points to the retractable air intake tube while the blue arrow shows the retractable exhaust tube. (Nationaal Archief Inventaris nr. 2754)

Admiral Johan T. Furstner, proponent of an aggressive risk theory utilizing battle cruisers and *Bevelhebber der Zeestrijdkrachten*, or commander of naval forces, from 1939 to the end of World War II. (Nationaal Archief 935-0560)

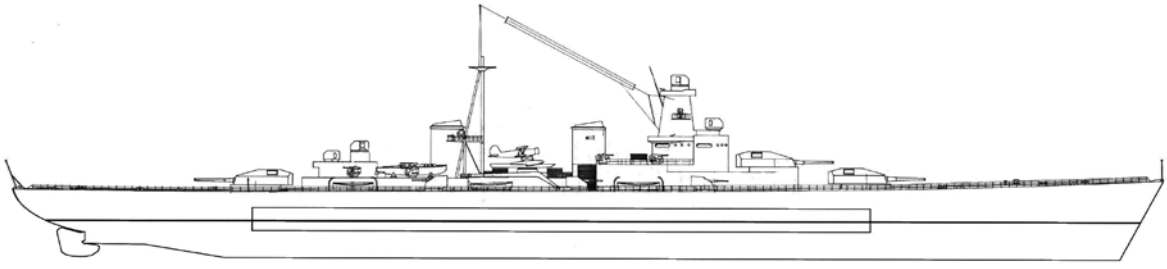
revealed that enemy aircraft could pose a serious threat to submarines operating on the surface in these waterways, Dutch commanders placed an emphasis on underwater approach and attack tactics. The need to communicate, coordinate and manoeuvre while submerged inspired the development of both the radioperiscoop and snuiver mentioned previously. There was also extensive training and use of hydrophones and, beginning with *O 16,* the Koninklijke Marine equipped its boats with the German Gruppenhorchgerät passive sonar system purchased from Atlaswerke AG. The German Periphon C active sonar system was installed in the O 19 and O 21 class boats.

Nighttime navigation and attack techniques on the surface were practised, as the cover of darkness largely negated the threat from enemy aircraft. The Koninklijke Marine also realized early on the importance of its own aircraft in the reconnaissance role for its submarine group tactics. Beginning in 1926, the *Marine Luchtvaartdienst* (naval air service), or MLD, acquired five Dornier Do-J *Wal* flying boats from the German manufacturer and a further 41 produced under licence in the Netherlands by the Aviolanda firm. Equipped with radios, these aircraft were used to scout for and direct the submarine divisions. This practice proved extremely successful in exercises and, in 1936, the MLD replaced the *Wal*s with the more capable Dornier Do-24 three-engine flying boat, designed specifically for the MLD. 30 were purchased from Dornier while another 60 were ordered under licence from Aviolanda.

By the beginning of World War II, the Koninklijke Marine's Onderzeedienst had utilized the latest technologies to develop arguably the most effective operational submarine tactics of any navy at that time.

RISK THEORY AND ITS IMPACT ON THE OPERATIONS OF KONINKLIJKE MARINE WARSHIPS, 1941–42

Towards the end of the 1930s, approval for the final vessels of the Vlootplan Deckers had been obtained and it appeared that the Koninklijke Marine would finally have enough vessels to implement its submarine-oriented defence strategy for the East Indies, devised as far back as World War I, against a potential Japanese invasion force. A force of three cruisers, two torpedokruisers, 12 destroyers and 18 submarines was hardly a force that could defend the entire archipelago though. Koninklijke Marine planners believed that this fleet would, however, allow the formation of two task forces which could at least defend the westward (Karamita Strait) and eastward (Makassar Strait) approaches to the island of Java. The island was the administrative centre of the colony and home to the Koninklijke Marine's primary bases at Tandjong Priok and Soerabaja. One of the young officers who helped to create this plan was *Luitenant-ter-zee der 1e klasse* Johan T. Furstner, who by 1939, had been promoted to *schout-bij-nacht* (rear-admiral) and became the first *Bevelhebber der Zeestrijdkrachten*, or commander of naval forces. Although Furstner was influential in the



Profile sketch of the Project 323 battle cruiser design prepared by Ingenieurskantoor voor Scheepsbouw (IvS) for the Koninklijke Marine in March 1940. Note the aesthetic similarities with the German Scharnhorst class battleships. (Author's collection)

development of submarine tactics throughout the 1920s, he was committed to the vision of a battlefleet as proposed by Rambonnet before World War I. In 1930, Furstner became director of the *Hogere Marine Krijgsschool*, or upper school for naval warfare, at the Koninklijke Marine's academy, and influenced a number of other officers and students with his beliefs on capital ships and risk theory.

Furstner became more vocal about his desire for capital ships after he learned of the German Kriegsmarine's strategy to deploy its new Scharnhorst class battleships and earlier Panzerschiffe on commerce raiding missions. The intention was to weaken the battle fleet strength of the Royal Navy by drawing battleships from the main fleet to protect the convoys against these new German capital ships. The commander of the Kriegsmarine, Admiral Erich Raeder, believed that the threat of his capital ships descending on British trade routes would compel the British to avoid another major conflict with Germany, hence a new risk theory and fleet-in-being. Furstner argued that a small number of battle cruisers, similar to the Scharnhorst class battleships, when combined with the vessels already planned for the East Indies fleet, would create a force powerful enough to convince the Japanese to avoid a campaign in the East Indies. He planned to send the battle cruisers and other Dutch vessels on raids against Japan's supply lines, making logistical support for a large amphibious force extremely difficult and a campaign in the East

The incomplete *Jacob van Heemskerck* in Great Britain following her escape from the Netherlands in the wake of the German invasion in May 1940. (Author's collection)

Indies costly, particularly when the Imperial Japanese Navy would also likely have to contend with the British Royal Navy and/or the United States Navy. In other words, Furstner believed that Japan did not have enough capital ships both to operate against British and American forces and protect invasion forces operating in the East Indies. By taking the fight to sea lanes in the South China Sea, Furstner also claimed that such a strategy could keep Japanese forces from even entering the waters around the East Indies and thus achieve a state of sea control there for the Koninklijke Marine. Cruisers, destroyers and submarines would be used to support these offensive actions. This was a drastic change from the well-coordinated submarine division defensive strategy honed throughout the interwar years.

This was a very optimistic appraisal of a risky and aggressive variant of naval risk theory, but Furstner felt pressured to vigorously pursue the construction of his capital ships. Beginning in 1939, Furstner and his

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THE NAVAL BATTLE FOR ROTTERDAM, 10 MAY 1940

The German invasion and occupation of the Netherlands in May 1940 ultimately had little effect on the fighting strength of the Koninklijke Marine, as most of its major vessels were stationed in the East Indies at the time. Of the major vessels in the Netherlands at the time, most were able to escape to Great Britain and saw little action in the Battle of the Netherlands. The cruisers *Sumatra* and *Jacob van Heemskerck* (still fitting out) both sailed for British ports on the evening of 10 May 1940. The destroyer *Isaac Sweers* was towed across the English Channel that same evening and she was completed with British armament and fire control systems by John I. Thornycroft & Company in May 1941. *Gerard Callenburgh* and *Tjerk Hiddes* were unable to be towed to Great Britain and they were scuttled in the Nieuwe Waterweg off Vlaardingen on 14 May 1940. *Gerard Callenburgh* was later raised and completed by the German Kriegsmarine as the destroyer *ZH1*; she served alongside other German destroyers in the Bay of Biscay until scuttled on 9 June 1944 after being crippled by British destroyers during the Battle of Ushant. The hull of *Philips van Almonde* was still on the stocks at De Schelde at the time of the invasion and was destroyed by a British demolition team on 17 May 1940. Of the modern submarines still fitting out or under construction, *O 21*, *O 22*, *O 23* and *O 24* all made it to Great Britain, where they would eventually be made combat ready. *O 25*, *O 26* and *O 27* had to be left behind and were later completed for service in the Kriegsmarine as *UD-3*, *UD-4* and *UD-5* and served primarily as training boats; *UD-3* and *UD-4* were both scuttled in Kiel in May 1945 but *UD-5* survived and was returned to the Koninklijke Marine, serving as *O 27* until 1959.

The Admiralen class destroyer *Van Galen*, having returned from the East Indies for a major refit, was the one major vessel to see combat during the German invasion. At 1030hrs on the morning of 10 May 1940, while patrolling off Den Helder, *Van Galen* received orders to proceed up the Nieuwe Waterweg canal, connecting the North Sea and Rotterdam, and attack German ground positions on the southern end of the road and rail bridges over the River Maas. The torpedo boat *Z 5* and motor torpedo boat *TM 51* had both been damaged by air attack but neither had been completely put out of action; this encouraged Admiral Furstner to dispatch *Van Galen*, believing that she likewise would be able to withstand any attacks by German aircraft. While sailing southward just before reaching the Hoek van Holland, *Van Galen* spotted several German Junkers Ju-52 transport aircraft that had made emergency landings on the beach at Ter Heijde. Several rounds from her 120mm Bofors guns quickly destroyed two of the aircraft and damaged others. At 0200hrs, *Van Galen* entered the Nieuwe Waterweg and proceeded towards Rotterdam at 18 knots, the maximum speed which her skipper was willing to cruise at in the narrow waterway. As she approached Vlaardingen, *Van Galen* came under air attack from two groups of Junkers Ju-87 dive bombers of the Luftwaffe's Lehrgeschwader 1 (IV.[St]/LG1). Unfortunately for her crew, *Van Galen's* 40mm Bofors anti-aircraft guns were inoperable, leaving only her four 12.7mm machine guns for defence. Despite the destroyer being unable to manoeuvre, the Stukas failed to achieve any direct hits. Concussions in the shallow channel from near misses damaged a number of bulkheads, however, and ruptured steam pipes and her hull. With his vessel unable to sustain much further damage, *Van Galen's* captain manoeuvred her to a quay at Merwehaven where her crew offloaded what weapons they could and abandoned ship. Later that day, she rolled onto her starboard side. Shown here is *Van Galen* under attack in the Nieuwe Waterweg from Stukas of IV.(St)/LG1.

Admiral Conrad E. L. Helfrich, *commandant der zeemacht in Nederlands-Indië*, or Naval Commander in the Dutch East Indies, and supporter of Furstner's risk theory. (Nationaal Archief 935-3497)

supporters in the Koninklijke Marine began to publicly campaign for capital ships and his revised risk theory. In spite of the high cost of the vessels, it was an opportune time – with rearmament beginning across Europe, the Japanese waging a war of aggression in China and an improving Dutch economy, the austerity-focused prime minister, Hendrikus Colijn, was willing to at least listen to Furstner's plan. Colijn had initially proposed the battle fleet advocated by Rambonnet a quarter of a century before and Furstner's appeal for a battle fleet resonated enough with him and his government that on 17 February 1939, the ministry of defence placed a request for battle cruiser design for consideration. The Koninklijke Marine envisioned a vessel similar to the Scharnhorst class battleships and contacted the *Hauptamt Kriegsschiffsbau* (construction department) of the German Kriegsmarine which responded that it would prepare a similar draft design for a 26,000-ton battle cruiser armed with nine 28cm guns. This draft was later used as the basis for more definitive designs from both IvS and NEVESBU, and negotiations for construction materials and armament began between the Koninklijke Marine and German naval firms. Surprisingly, the Kriegsmarine continued to advise on the battle cruiser project well into April 1940, the month before the German invasion of the Netherlands. Germany invaded the Netherlands on 10 May 1940 (primary due to the Luftwaffe's insistence that the British Royal Air Force might use neutral Dutch air space to attack German industrial targets from) and compelled the Dutch to surrender on 14 May, five days later, following the Luftwaffe's infamous terror bombing of Rotterdam. (*See* Plate F for details about Dutch warships in the Netherlands during the German invasion) Admiral Furstner and his staff escaped to Great Britain to fight another day but his dream of Dutch battle cruisers ended as abruptly as had earlier dreams of Dutch dreadnoughts. The aggressive risk strategy did not die with the dream of battle cruisers or the occupation of the home country, however, and Furstner and *Viceadmiraal* Conrad Helfrich – a friend and protégé of Furstner's whom the latter promoted to the *Commandant der Zeemacht in Nederlands-Indië* (commander of naval forces in the East Indies) in August 1940 – rigorously worked to implement the strategy among the East Indies fleet.

Beginning in the autumn of 1940, the now allied British and Dutch, along with the Australians and Americans, participated in a series of conferences in Singapore to discuss joint defensive operations in Southeast Asia. The British argued that the first naval action in a war with Japan should be the dispersal of naval forces for convoy protection in order to maintain supply routes into Singapore, home of the Royal Navy's largest base in the region. Due to an increasing American presence in the Atlantic throughout 1941, the Royal Navy began moving capital ships to the Indian Ocean and planned to form an Eastern Fleet, based in Singapore, within 80 days of American entry into the war. This Eastern Fleet would serve as the primary force to counter Japanese advances in Southeast Asia. Since it was planned that the Royal Navy would have the largest presence of the Western Powers in the Far East, the British therefore advocated that American, Dutch and Australian

forces in the region would come under British strategic control. Furstner and Helfrich were both willing to place most Dutch vessels under British control as the Royal Navy's Eastern Fleet strategy echoed Furstner's battle cruiser risk strategy. British capital ships and submarines would attack extended Japanese supply lines and the Imperial Japanese Navy would be forced to concede control of the waters around the British and Dutch colonies as it did not have enough capital ships of its own to protect convoys and troop movements as well as defend against the United States Navy's Pacific Fleet. The battleship *Prince of Wales* and battle cruiser *Repulse*, sent at Prime Minister Winston Churchill's insistence to reinforce the Royal Navy's forces in Singapore in the autumn of 1941, were intended to act as a fleet-in-being in the same manner Furstner had envisioned for his battle cruisers. Encouraged by the Royal Navy's plans to go aggressively after Japanese logistics routes if need be, Helfrich agreed to hand over control of *De Ruyter*, *Java*, *Tromp*, six destroyers and eight submarines to the British, provided Java was not endangered at the time.

British Prime Minister Winston Churchill aboard the Royal Navy battleship HMS *Prince of Wales*. Like Furstner, Churchill believed that a small force of capital ships based in Southeast Asia would likely deter the Japanese from offensive operations in the area. Furstner's advocacy of such a risk theory among the Allied Leadership may have influenced Churchill in his decision to send HMS *Prince of Wales* and HMS *Repulse* to Singapore in the autumn of 1941. (Photo by Capt. Horton/ Imperial War Museums via Getty Images)

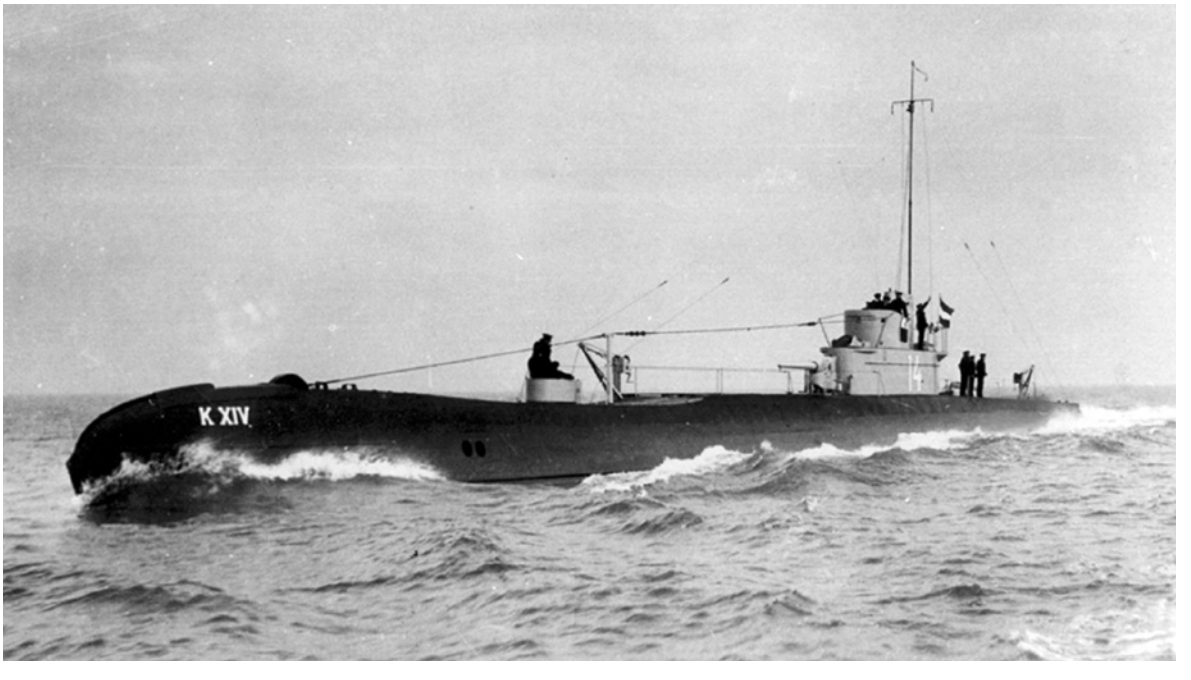
Following the Japanese attacks on Pearl Harbor and Hong Kong, the Dutch Government-In-Exile declared war on Japan on the morning of 8 December 1941. This was a startling show of solidarity with their allies, particularly as the Japanese did not make a formal declaration of war against the Netherlands until 11 January 1942. The Koninklijke Marine's order of battle in the East Indies on 8 December was as follows:

Eskader der Koninklijke Marine in Nederlands-Indië	
Cruisers	*De Ruyter, Java, Sumatra, Tromp*
Destroyers – Divisie Torpedobootjagers I	
	Groep 1: *Kortenaer, Van Ghent, Witte de With*
	Groep 2: *Banckert, Piet Hein*
	Groep 3: *Evertsen, Van Nes*
Submarines – Flottille Onderzeeboten	
	Divisie Onderzeeboten 1: *O 16, K XVII, K XVIII*
	Divisie Onderzeeboten 2: *K IX, K XI, K XII, K XIII*
	Divisie Onderzeeboten 3: *K XIV, K XV, K XVI*
	Divisie Onderzeeboten 4: *O 19, O 20*
	In Reserve: *K VII, K VIII, K X*

As prearranged, a number of the units of the East Indies fleet came under British control or supported Royal Navy operations. Dutch surface vessels were primarily occupied with convoy escort duties during the first weeks of

the Pacific war; the first Koninklijke Marine units to see action against the Japanese were its submarines.

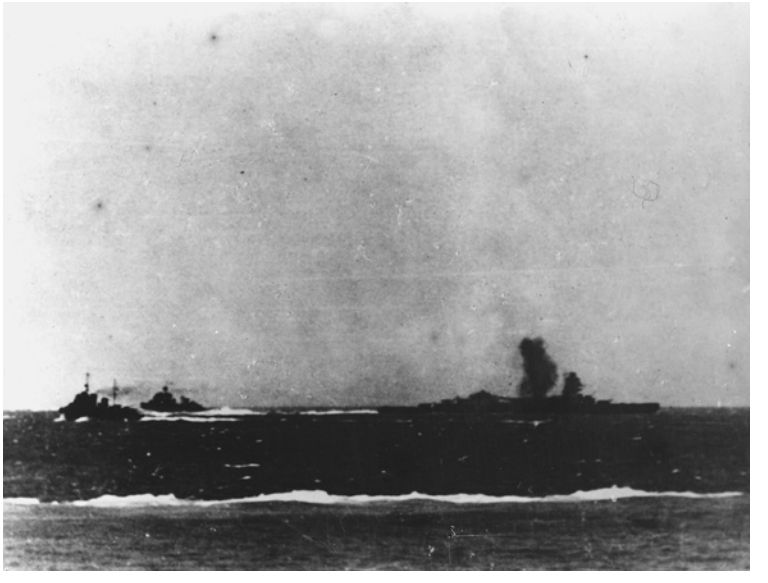
The boats of Divisie Onderzeeboten 1, 2 and 4 were sent to Singapore and placed under the command of Admiral Geoffrey Layton, the Royal Navy's Commander-in-Chief, Eastern Fleet. Layton dispatched them into the Gulf of Thailand and the South China Sea to attack Japanese forces operating off the coast of British Malaya. The old *K XII* was the first Dutch submarine to draw blood against the Japanese. On 12 December, she torpedoed and sank the 9,794-ton troopship *Awajisan Maru*, which had been abandoned following a fire off the north Malaysian coast. The next day *K XII* sank the 3,525-ton tanker *Taizan Maru* in the same area. *O 16*, commanded by *Luitenant-ter-zee der Eerste Klasse* Antonie Bussemaker, was particularly successful. On the evening of 12 December, Bussemaker observed a Japanese troop ship sailing, completely lit, towards Pantani in northeastern Malaya. He followed her on the surface as she entered a shallow anchorage but used the boat's electric motors to approach stealthily. Fortune favoured this bold move as three other Japanese merchant ships were discovered at anchor. *O 16* fired four torpedoes from her bow tubes and then turned and fired a departing shot from the stern, all while on the surface and without being discovered. In quick succession, the 8,666-ton troopship *Tosan Maru*, the 8,812-ton troopship *Asosan Maru*, the 9,788-ton troopship *Ayata Maru* and the 7,170-ton freighter *Sakura Maru* were all sunk in Patani Bay. Unfortunately, on 15 December, *O 16* struck a mine after accidentally sailing into a minefield north of Tioman Island and quickly sank with only one of her crew surviving. *O 20* was lost on 19 December when her crew scuttled her after being caught on the surface by a Japanese destroyer. On 21 December, *K XVII* was lost in the same minefield as *O 16* with no survivors. The last success achieved by Dutch boats under British control was by *O 19* on its second patrol from Singapore. On 10 January 1942, *O 19* came across two Japanese merchantmen sailing



Submarine *K XIV*'s attack on a Japanese convoy, in which she was guided by a Do-24 flying boat of the MLD, on 23 December 1941, and the subsequent attack by *K XVI* on the Japanese destroyer *Sagiri*, were the only examples of the pre-war coordinated submarine division attack tactics utilized by the Koninklijke Marine in the early months of the war. (Ministerie van Defensie)

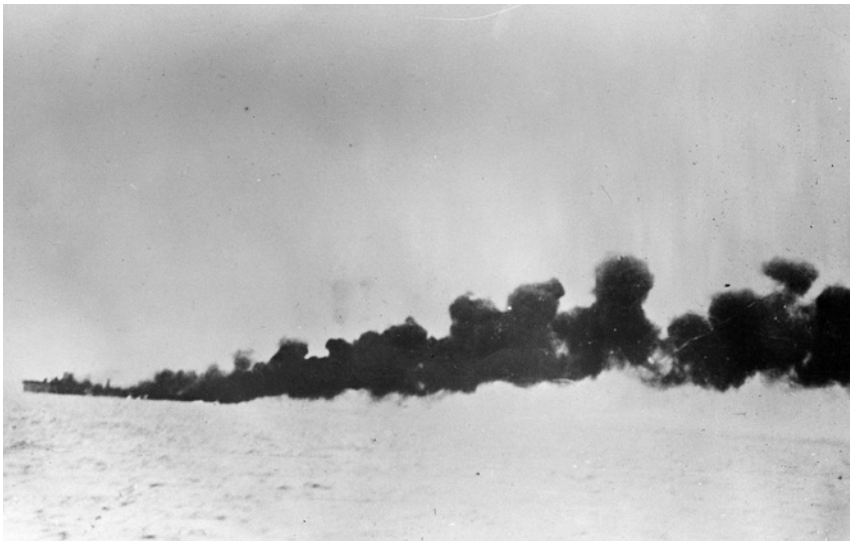
alone in heavy seas in the Gulf of Thailand. *O 19's* commander fired two torpedoes at the smaller vessel but following two explosions noticed both vessels were on fire; he had managed to sink the 3,817-ton *Akita Maru* and inadvertently the 4,944-ton *Taieryu Maru*.

Admiral Helfrich retained operational control of Divisie Onderzeeboten 3 after the outbreak of hostilities with Japan and sent them to patrol the Karimata Strait between Sumatra and Borneo. On the afternoon of 23 December, *Luitenant-ter-zee eerste klasse* Carel van Well Groeneveld, aboard *K XIV,* received a sighting report of a Japanese invasion force off the northwestern coast of Borneo, heading for Kuching. A Marine Luchtvaartdienst (or Dutch Naval Air Service) Dornier Do-24 flying boat spotted a convoy of ten merchantmen escorted by four cruisers, five destroyers and a seaplane tender. Groeneveld set an intercept course and found the convoy anchored off the mouth of the Serawak River early that evening. *K XIV* submerged just below the surface as the depth in the anchorage was only 45ft. Groeneveld targeted two troopships and sent two torpedoes into each; both the 9,848-ton *Katori Maru* and 4.943-ton *Hiyoshi Maru* sank taking hundreds of Japanese soldiers with them. This attack alerted the Japanese that a submarine was present but *K XIV* miraculously managed to evade their destroyer sweeps, damaging one of its propeller blades on a shoal. Groeneveld then found his boat in position to fire upon two other merchantmen and sent a torpedo into each – the 8,416-ton troopship *Hokkai Maru* was saved only by being beached while the 6,503-ton tanker *Nichiran Maru* was severely damaged. *K XIV* then escaped to sea and, after midnight on 24 December, Groeneveld radioed *K XV* and *K XVI*, instructing them to attack the remaining Japanese vessels off Kuching. The following evening, *K XVI* closed in on the destroyer *Sagiri* and sent two torpedoes into her; the destroyer's aft magazine caught fire and exploded, quickly sending her to the bottom. *K XVI* remained off Kuching into the morning of 25 December but was attacked while on the surface by the Japanese submarine I-*66* and sank with all hands.



An Admiralen class destroyer (left), *Tromp* (centre), and *De Ruyter* (right) under Japanese air attack in the Gaspar Strait off Sumatra on 15 February 1942. (Nationaal Archief 935-3356)

By the beginning of 1942, over one-quarter of the East Indies squadron's total submarine force had been lost (in addition to combat losses, *K XIII* was crippled by a battery gas explosion while at Singapore on 21 December 1941) in return for a relatively low tonnage of Japanese shipping being sunk. They had not slowed the Japanese advance into Southeast Asia and the loss of *Prince of Wales* and *Repulse* to Japanese aircraft on 10 December 1941 precluded any capital ship raids against Japanese supply lines. On 2 January 1942, Admiral Helfrich ordered his boats to avoid unnecessary risks when attacking enemy vessels and recalled *K XVIII* to Soerabaja in order to form a new division with *K XIV* and *K XV*. He left *O 19*, *K IX*, *K XI* and *K XII* to



Van Ghent on fire after being scuttled by her crew when she ran aground on a reef in the Gaspar Strait on 15 February 1942. (Nationaal Archief 935-0353)

continue to operate out of Singapore for the time being. On 15 January, Helfrich sent *K XIV* and *K XVIII* to patrol the Makassar Strait between Borneo and Celebes as a Japanese amphibious operation against the port of Balikpapan was expected soon. *K XVIII*, commanded by Carel van Well Groeneveld (formerly of *K XIV*) located the Japanese invasion force on the morning of 23 January and shadowed it to an anchorage near Balikpapan. That evening *K XVIII* approached the Japanese force, submerged up to the conning tower, and fired four torpedoes against the light cruiser *Naka*, flagship of the task force commander Admiral Shoji Nishimura; the torpedoes missed *Naka* but struck and sank the 6,988-ton merchantman *Tsuruga Maru*. She also targeted and sank the 935-ton patrol boat *P 37* but was depth-charged throughout the next day by Japanese

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BATTLE OF BADOENG STRAIT, 19–20 FEBRUARY 1942

In the early morning hours of 19 February 1942, a Japanese invasion force consisting of two transports and the destroyers *Arashio*, *Asashio*, *Michishio* and *Oshio*, conducted an amphibious landing on the southeastern coast of the island of Bali, just east of Java. As most of his more powerful vessels were scattered at the time of the invasion, Admiral Helfrich ordered three waves of attacks against the invasion force to commence later that evening, allowing time for some of his forces to concentrate. Doorman led the first force, *De Ruyter*, *Java*, *Piet Hein* and the American destroyers *John D. Ford* and *Pope* strung out in a long line around the southern coast of Bali and northeast into the Badoeng Strait around 2230hrs. An hour later, Doorman encountered *Asashio* and *Oshio* covering a transport in the Sanoer Roads and made a fruitless hit-and-run attack with *De Ruyter* and *Java* against the Japanese vessels, speeding off to the northeast. The Japanese destroyers, now alerted, caught *Piet Hein* sailing alone and succeeded in torpedoing her at 2337hrs and raked her sinking wreck and crew with machine gun fire; *John D. Ford* and *Pope*, trailing further behind, were driven off by the more-powerful Japanese vessels. Shortly after 0130hrs, on 20 February, the second Allied attack force, the American destroyers *Stewart*, *Parrott*, *John D. Edwards* and *Pillsbury*, followed at a distance by *Tromp*, approached the Sanoer Roads from the south and engaged *Asashio* and *Oshio*. The American destroyers fired 15 torpedoes against the two Japanese vessels but all missed. With their superior firepower, the Japanese again drove the Americans off. At 0205hrs *Tromp* approached and caught the Japanese destroyers with her searchlight; unfortunately for the Dutch the searchlight served as a target for the Japanese, who concentrated their fire against the newcomer. *Tromp* was badly damaged but scored a number of hits on the destroyers and succeeded in driving them back; *Tromp* also withdrew. At 0219hrs, *Arashio* and *Michishio* stumbled into the Allied force and beat a hasty retreat with *Michishio* badly damaged; *Tromp* and the American destroyers withdrew to the northeast. A third Allied attack wave of seven Dutch motor torpedo boats sailed into the Badoeng Strait three hours later but were unable to locate the Japanese and withdrew. The piecemeal nature of the Allied attacks allowed for an outnumbered Japanese force to hold off a numerically superior Allied force in what became known as the Battle of Badoeng Strait. Only *Tromp*, shown here engaging *Asashio* and *Oshio*, inflicted any serious damage on the Japanese. This battle is unique in that it was the only engagement during the East Indies Campaign in which a Dutch surface warship succeeded in driving off Japanese warships.

destroyers. Heavily damaged, she managed to limp back to Soerabaja but was out of action for the remainder of the East Indies Campaign. By this time, the Japanese had pushed down the Malayan Peninsula and were at the gates of Singapore while the United States Navy had pulled out of the Philippines, leaving the fate of the islands in the hands of the ground forces on the Bataan Peninsula. The boats based at Singapore returned to Soerabaja before the end of January and returned to Dutch control. For the remainder of the East Indies Campaign, Helfrich dispatched his remaining submarines into the Karamita and Makassar Straits to patrol against Japanese invasion forces. But it was too late to effectively go back to the Koninklijke Marine's earlier submarine defensive strategy for Java – Helfrich no longer had enough operational submarines to organize into coordinated attack groups; the aggressive offensive operations undertaken at the beginning of hostilities had claimed too many boats and had broken up the pre-war division structures. Furthermore, the submarines did not have the cruiser and destroyer reconnaissance screens with which they had trained before the war – Helfrich had other plans for his surface vessels.

On 2 February 1942, the joint Allied command in Southeast Asia, American–British–Dutch–Australian Command (ABDACOM), formed what was termed as the ABDA Striking Force, a force of cruisers and destroyers placed under the commander of *Schout-bij-nacht* Karel Doorman, who had commanded the East Indies squadron since May 1940. During December and January, Allied surface vessels were primarily engaged in supporting supply convoys into the region but, with the fall of Singapore imminent, priorities shifted to blunting further Japanese advances. Unsurprisingly, Helfrich was the primary proponent for the creation of the Striking Force. The primary objective of the Striking Force was to attack any Japanese task force approaching the Malay Barrier, a nominal defensive line running southwards from Singapore to Sumatra and on to Java. On 3 February, the Striking Force – the heavy cruiser USS *Houston*, the light cruisers *De Ruyter*, *Tromp*, USS *Marblehead*, and the destroyers *Banckert*, *Piet Hein*, *Van Ghent* plus four American destroyers – sailed into the Makassar Strait, intent on intercepting a Japanese invasion force bound for southern Borneo and Celebes. The next morning, the Striking Force came under attack from a large force of Japanese bombers and, lacking any air cover, withdrew before making contact with the invasion force. Both *Houston* and *Marblehead* were damaged in what became known as the Battle of the Flores Sea. On 14 February, Doorman took the Striking Force – now lacking the *Houston* and *Marblehead* but with the addition of the heavy cruiser HMS *Exeter*, the light cruiser *Java*, HMAS *Hobart*, the destroyer *Kortenaer*, and two more American destroyers

Japanese Nakajima B5N 'Kate' torpedo bombers from the aircraft carrier *Ryujo* flying over the burning wreck of the destroyer *Van Nes*, which they attacked and sank off Sumatra on 17 February 1942. (Imperial Japanese Navy)

A motorized unit of the Koninklijk Nederlands Indisch Leger (KNIL), or Royal Netherlands East Indies Army, passing alongside *De Ruyter* in Soerabaja. On the evening of 26 February 1942, *De Ruyter* sortied from Soerabaja for the last time in the Koninklijke Marine's final attempt to defend Java. (Nationaal Archief 935-3355)

– into the Gaspar Strait off the southeastern coast of Sumatra to attack a Japanese naval force supporting landings near Palembang. Early on the morning of 15 February, *Van Ghent* ran aground on a reef and had to be scuttled by *Banckert*. Throughout the late morning and afternoon, Doorman's force came under attack from Japanese carrier-based and land-based bombers and again, due to a lack of air cover, was compelled to withdraw. On 17 February, the destroyer *Van Nes* was sent to support the evacuation of southern Sumatra but was intercepted and sunk by Japanese carrier-based aircraft.

With Sumatra largely secured, the Japanese began their move against Java on 18 February, beginning with the occupation of Bali. Doorman and his Striking Force fought a running battle with Japanese ships off Bali in the Badoeng Strait on the evening of 19–20 February but was unable to drive them off. (*See* Plate G for details about the Battle of the Badoeng Strait). Helfrich knew from intelligence reports that landings on Java were soon to follow as Japanese invasion forces had been spotted heading for both the western and eastern ends of the island. To counter these moves Helfrich formed a Western Striking Force, made up of British and Australian cruisers and destroyers, and reinforced Doorman's force into a Combined Striking Force, tasked with defending the eastern approaches to Java; Doorman now had under his command the heavy cruisers *Houston* and *Exeter*, the light cruisers *De Ruyter*, *Java* and HMAS *Perth*, and the destroyers *Kortenaer*, *Witte de With* and seven other Allied destroyers. Doorman sailed his force out of Soerabaja on the evening of 26 February after sightings of a Japanese force heading down the Makassar Strait. On the early afternoon of 27 February, a Dutch flying boat located the Japanese and Doorman plotted an intercept course. Shortly after 1600hrs, the opposing forces made contact; Doorman was facing the heavy cruisers *Haguro* and *Nachi*, the light cruisers *Jintsu*

Tromp in the Netherlands in 1946. She was the only major Dutch surface warship of the East Indies squadron to have survived World War II. (State Library of Victoria)

and *Naka*, and 14 destroyers, covering ten transports, all under the command of Rear Admiral Takeo Takagi.

The Battle of the Java Sea began with a long-range gunnery duel in which both sides suffered damage. Later in the battle, Takagi employed a devastating new tactic – massed torpedo attacks. In one of the first uses of this tactic, *Kortenaer* was struck by a torpedo at 1713hrs and broke her back. Advised of Doorman's movements by his reconnaissance floatplanes, Takagi was able to effectively parry any Allied attacks towards the Japanese transports as well as keep his opponents at a longer range. Without aerial reconnaissance of his own (Doorman's vessels went into combat without their spotter aircraft), Doorman withdrew his force around 1830hrs screened by a massed torpedo attack of his own. He intended to break off the engagement, circle around Takagi's vessels in the increasing darkness and attempt to intercept the Japanese transports from behind. After several hours attempting to steam around Takagi's ships, Doorman's remaining vessels again encountered the Japanese at 2315hrs. Both sides, low on ammunition, conducted a sporadic gunnery duel until 2322hrs when *Haguro* and *Nachi* each launched a long-range torpedo attack. One of the torpedoes struck *Java* near her stern magazine, causing it to explode and ripping off the cruiser's stern. She sank in 15 minutes and only 19 of her crew survived. *De Ruyter* was also struck by a torpedo near her starboard engine room, knocking out the ship's power. Without power for the pumps, fires and flooding spread unchecked and the order to abandon ship was given – Doorman was lost with his flagship. Following the loss of the Dutch cruisers, the remaining Allied vessels retired to Java[1].

The Battle of the Java Sea marked the end of any effective Allied naval resistance to the Japanese in Southeast Asia. After the battle, Admiral Helfrich, who had served as overall ABDA naval commander since 11 February, ordered all remaining Allied warships to assemble at the Dutch naval base at Tjilatjap on the southern coast of Java in an effort to form one last striking force to throw at the Japanese. *Houston* and *Perth*, accompanied by the destroyer *Evertsen*, complied and sailed from Tanjong Priok on the evening of 28 February. Unfortunately, they stumbled into the Japanese invasion force bound for western Java and were overwhelmed in a fierce night action. All of the Allied vessels were lost in what became known as the Battle of Soenda Strait. After this action, the remaining British and American

1 For further details about the Battle of the Java Sea, see Jeffrey Cox's *Rising Sun, Falling Skies: The Disastrous Java Sea Campaign of World War II*, and Mark Stille's CAM 344: *Java Sea 1942*, both also published by Osprey Publishing.

naval commanders on Java opposed any further suicidal attacks against the Japanese and told Helfrich that they were withdrawing their remaining vessels to Ceylon and Australia. Faced with this and the loss of the majority of the East Indies squadron, Helfrich dissolved the ABDA naval command on 1 March and ordered its remaining vessels to evacuate. On 2 March, he ordered all remaining unserviceable vessels to be scuttled and he and his staff evacuated to Ceylon two days later. The destroyers *Banckert* and *Witte de With* were damaged in aerial bombings off Soerabaja on 24 February and 1 March respectively and had to be scuttled. They were followed by the damaged submarines *K X*, *K XIII* and *K XVIII*. The old *K VII* had already been sunk in an air raid on 18 February. *Tromp* was the only major surface vessel of the Koninklijke Marine to survive the East Indies Campaign. Damaged in the Battle of Bandoeng Strait, she had been sent to Australia for repairs on 23 February. The submarines *K VIII*, *K IX*, *K XI*, *K XII*, *K XIV*, *K XV* and O *19* were able to escape to Australia and Ceylon. On 9 March 1942, the Japanese completed their conquest of the East Indies when the Dutch colonial authorities surrendered.

CONCLUSION

The losses sustained by the Koninklijke Marine in the Southeast Asian campaigns of 1941–42 ended its ability to fight as an independent entity for the remainder of World War II. These losses were primarily due to Admirals Furstner's and Helfrich's pursuit of an unproven and aggressive risk strategy, adopted just before the beginning of World War II. Even had Dutch battle cruisers been present for the campaign, it is likely they would have suffered at the hands of Japanese air power just as *Prince of Wales* and *Repulse* had. One can only speculate whether the Koninklijke Marine's East Indies squadron may have had more success had it executed its pre-war coordinated submarine defensive strategy – at least it would have been a strategy that Dutch commanders and crews had been extensively trained in. American and British historians have traditionally been critical of the performance of the Koninklijke Marine during these first campaigns of the Pacific War without effectively explaining its seemingly controversial course of actions. Using recent Dutch scholarship, this volume has attempted to introduce the primary reasons and rationale behind the design, construction and deployment of the Koninklijke Marine's primary warships in the East Indies during World War II. Subsequent events should in no way, however, detract from the abilities of the Dutch naval industry, acquired during the interwar years, to design and build modern warships of high quality and possessing the latest technical advancements. Nor should they diminish the bravery shown by Dutch officers and sailors aboard those vessels during the early campaigns of the war and while their vessels served with the British Royal Navy following the surrender of the East Indies (*see* Plates B, D and E for further information about Koninklijke Marine vessels under British command). Ultimately, the Koninklijke Marine's warships and their actions in the Fast East in 1941–42 were very much a reflection of the financial, political and strategic struggles facing a small nation with a large imperial footprint, set against the backdrop of the two most destructive wars and the worst financial crisis in modern history.

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